THE BUILDER

A JOURNAL FOR THE ARCHITECT & CONSTRUCTOR

VOL. CXLIII. FRIDAY, JULY 15, 1932. NO. 4667

LEADING CONTENTS

ILLUSTRATIONS.

PAGE

ST. MARGARET'S HOUSE, 19-23, WELLS-STREET, W. MESSRS. RICHARDSON AND GILL, FF.R.I.B.A., ARCHITECTS 89

CHURCH OF ST. MARY THE VIRGIN, EATON SOCON, HUNTS. MESSRS. RICHARDSON AND GILL, FF.R.I.B.A.A., ARCHITECTS. VIEW FROM SOUTH-WEST, 90; VIEW IN NAVE, LOOKING EAST, 91; VIEW OF SCREEN, LOOKING TOWARDS CHANCEL, 92; PLAN AND SECTION, 93; ELEVATION, 94; CHURCH AFTER FIRE..... 86

THE "DAILY EXPRESS" BUILDING, FLEET-STREET, E.C. MESSRS. HERBERT O. ELLIS AND CLARKE, FF.R.I.B.A., ARCHITECTS. EXTERIOR, 95; STAIRCASE, 96 AND 82; AN INTERIOR, 96; MAIN PUBLIC HALL (DESIGNED BY MESSRS. ROBERT ATKINSON), 97 AND 80; PLANS, 98; SECTION 84

ENGLISH COTTAGE COMPETITION: PREMIATED DESIGNS 98A-98D

THE HENRY KINGSLEY MEMORIAL, CUCKFIELD. DESIGNED BY MR. ARNOLD WHITTICK.. 79

FARMYARD AT PONT-L-EVEQUE, NORMANDY. FROM A SKETCH BY MR. T. E. ECCLES, F.R.I.B.A. 83

ARTICLES.

	PAGE		PAGE
MEETINGS	79	HINTS ON BUILDING PRACTICE—III: BY J. R. TAYLOR	105
LEADER: SCHOOL BUILDINGS	81	ADVISORY COUNCIL FOR THE BUILDING INDUSTRY	106
NOTES	82-3	BUILDING TRADE WORKERS' CONFERENCE	106
GENERAL NEWS	84	WESTMINSTER REDEVELOPMENT	107
COMPETITION NEWS	84	ARMY VOCATIONAL TRAINING	107
BARTLETT SCHOOL OF ARCHITECTURE	84	BUILDING ACT ADVISORY COMMITTEE	107
CORRESPONDENCE	85	CORROSION IN HOT WATER TANKS ..	107
"THE BUILDER" DEBATE	85	NEW BUILDINGS IN LONDON	108
CHURCH OF ST. MARY THE VIRGIN, EATON SOCON, HUNTS	86	NEW CINEMAS	108
THE "DAILY EXPRESS" BUILDING: REVIEWED BY L. W. THORNTON WHITE	87	RATES OF WAGES	109
NOTES ON ILLUSTRATIONS	88	CONTRACTS, COMPETITIONS, ETC.	110
ARCHITECTURAL ASSOCIATION: ANNUAL PRIZEGIVING	99	PROPOSED NEW BUILDINGS AND OTHER WORKS	112
ROYAL SANITARY INSTITUTE CONGRESS AT BRIGHTON	100	PRICES CURRENT OF BUILDING MATERIALS	114
HEATING AND VENTILATING CONGRESS	101	PATENTS AND NEW COMPANIES	115
CAST CONCRETE AND ITS TECHNICAL PROBLEMS	102	NEW BUILDINGS IN SCOTLAND	115
INQUIRY BUREAU	104	CURRENT PRICES FOR BUILDING WORK IN LONDON	116
WEEK IN PARLIAMENT	104	TRADE NEWS	117
		TENDERS	117-120

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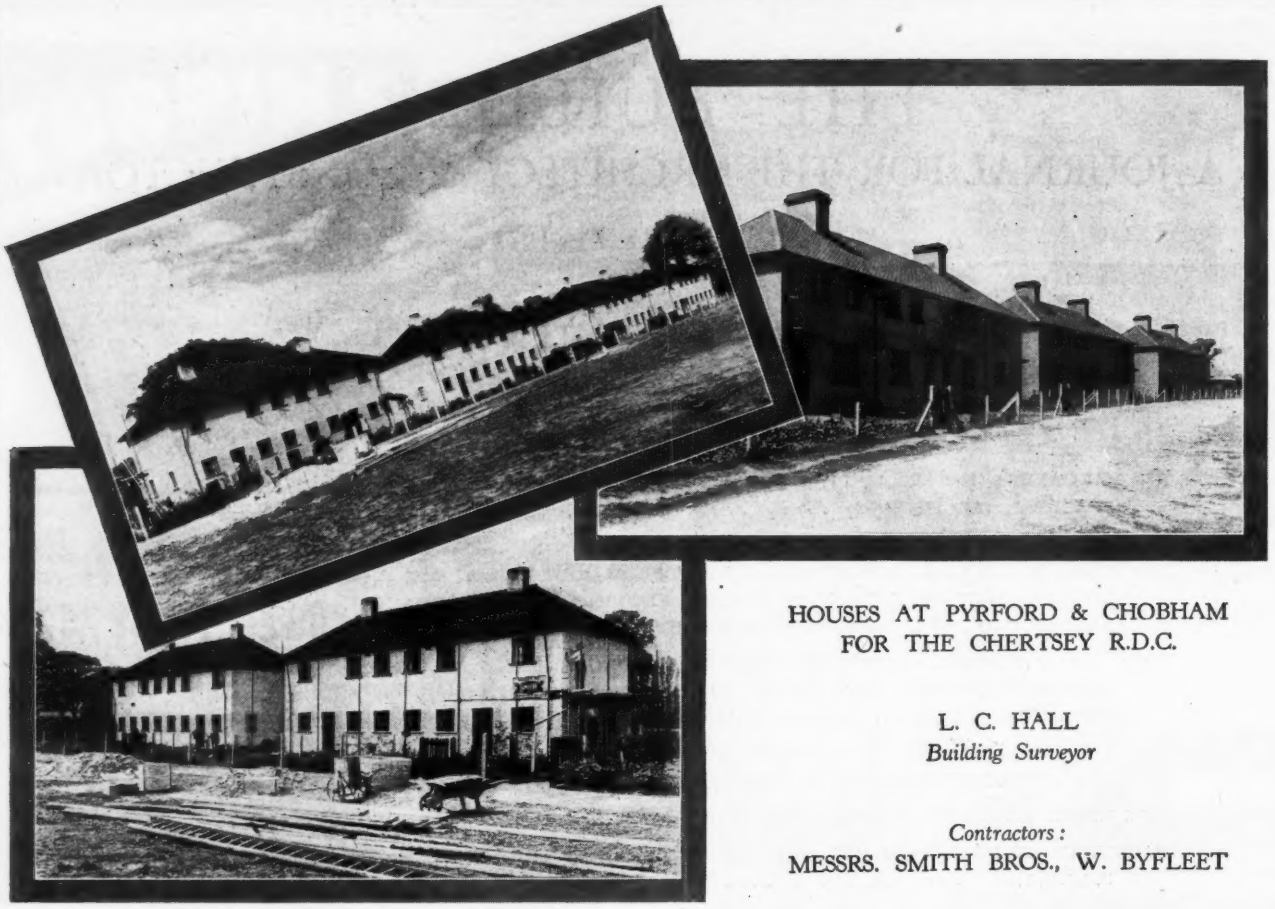
90TH YEAR



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FOR THE CHERTSEY R.D.C.

L. C. HALL
Building Surveyor

Contractors:
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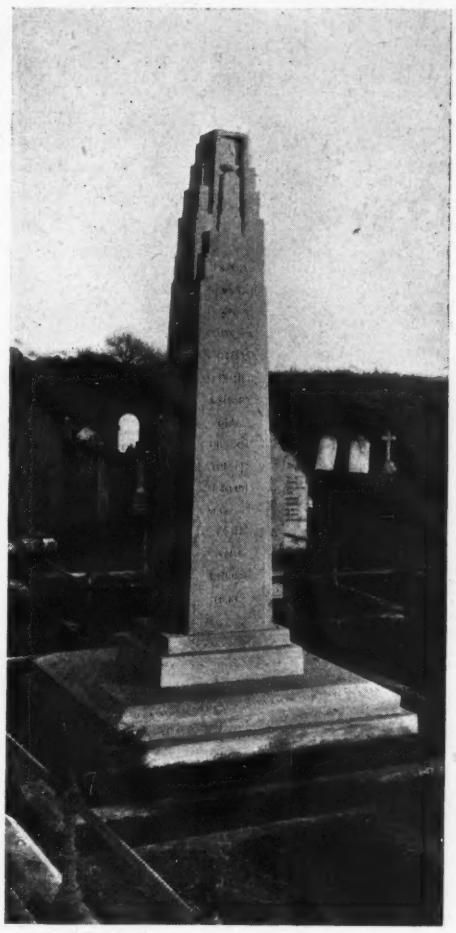
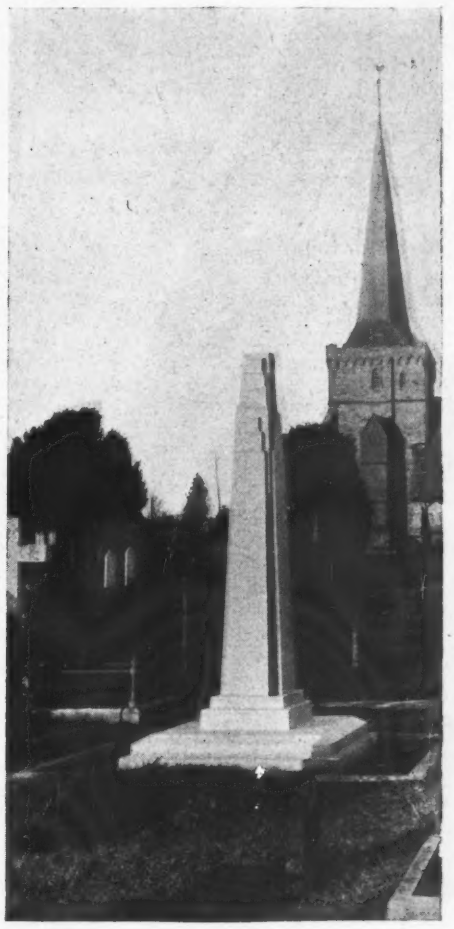




The Henry Kingsley Memorial, Cuckfield.

Designed by MR. ARNOLD WHITTICK.

(*See page* 85).

MEETINGS

FRIDAY, *July* 15.

Institution of Municipal and County Engineers. Meeting of the North-Eastern District. At Burnhope Reservoir. 2 p.m.

SATURDAY, *July* 16.

London Society. Visit to Royal Hospital of St. Bartholomew, Smithfield, E.C.1. 2.30 p.m.

St. Paul's Ecclesiological Society. Visit to St. Mary Magdalene Church, East Ham.

TUESDAY, *July* 19.

Lambeth Borough Council. Opening the new Lambeth Bridge by Their Majesties the King and Queen. 3.30 p.m.

TUESDAY-SATURDAY, *July* 19-23.

Hampshire and Isle of Wight Architectural Association. Annual Exhibition. At Bournemouth.

WEDNESDAY-FRIDAY, *July* 20-22.

Incorporated Institute of British Decorators. Conference on Decoration. At the Painters' Hall, Little Trinity-lane, E.C.4.

THURSDAY, *July* 21.

Institution of Structural Engineers. General Meeting to discuss the revision of the Institution's Report, "Steelwork for Buildings, Part 1, Loads and Stresses." 6.30 p.m.

Institution of Municipal and County Engineers. East Midland District Meeting. At Stamford. 10 a.m.

MONDAY-SATURDAY, *July* 25-*August* 13.

London Society. Exhibition of Plans and Measured Drawings. At 9, Conduit-street, W.1. 5 p.m.

Photograph: Humphrey and Vera Joel.

The "Daily Express" Building, Fleet Street, E.C.: Main Public Hall. Designed by Messrs. Robert Atkinson.

MESSRS. HERBERT O. ELLIS AND CLARKE, FF.R.I.B.A., Architects.

SCHOOL BUILDINGS

THERE are certain classes of building which set a prominent mark on the architectural character of the country, of which classes we should mention churches, banks, hotels, and inns, and schools, as possibly the most characteristic. These buildings are either by their size and site, or deliberately as a part of promoter's policy, of a type which the passer-by can hardly ignore, for they impose themselves upon attention. They have all a distinctive form of their own, brought about by the uses to which they are put, and in almost all cases there can be no doubt for what purpose each was built. Their design and treatment is therefore of very great architectural importance, as well as public convenience.

Those who have observed the changes, whether subtle and slow, or marked and revolutionary, in the building practice of this country, will have noted that for the most part changes have been for the better. The churches are less ponderous exercises in student Gothic; the banks have a graceful freshness in their conservative tradition; the hotels and inns frequently attract by their charm instead of stunning with obtrusion. A few schools also take advantage of the form and rhythm of orderly planning to add handsomely to the architecture of the neighbourhood; but, it must be confessed, they continue for the most part to be uninspired reproductions of Board of Education regulations. Windows in size and place, class-rooms in aspect and cubic content, railings, outbuildings, and playgrounds, alike appear to take the form laid down in the book, with little attempt to make these limitations the servants of skilful assembly. Our typical school is not a thing of beauty, but just a necessary piece of stock furniture.

In Mr. John Sargent's paper,* which we have before us, there are some pertinent remarks upon this score, and we may with advantage quote the following passage:—

> "The (school) building should not look like an institution or a hospital or the unsanctified version of some ecclesiastical edifice, but should suggest a place in which children work and play and are happy. Then I would lay stress on its having some æsthetic value, some beauty. This not only applies to the external elevation, but also to the arrangement and decoration of the interior. To this end I believe a good many authorities are now calling their art advisers into consultation."

The following paragraph also sounds the note of our introductory remarks:—

> "Architect friends have told me that many of the finest examples of their art to-day are to be seen in banks and public-houses. It is difficult to see why the buildings in which we keep our money or our beer should be either finer or fitter for their purpose than those in which we keep our children. And lastly, there is that inseparable adjunct of the complete school—the playground and the playing-field. A prominent Victorian economist once said that man made the school but God made the playgound. Why do so many of our playgrounds simply testify to the mysterious workings of Providence?"

Mr. Sargent writes with much feeling upon a subject which is evidently more to him than a matter of business, and it is very refreshing to find in a layman the knowledge that architecture is a matter which drives deeply into the daily life of the public. Apart from that close approach to the architectural view-point, he has some very practical remarks to make upon the lay-out and planning of school buildings. Of special interest are those who point out the unwisdom of planning a school on too specialist a plan—*i.e.*, specially for juniors or specially for seniors; for Mr. Sargent points out how quickly the requirements of a district change: being for a few years largely junior, and quickly afterwards largely senior. Unless we are content to see the waste of schools running half empty or overcrowded it is obvious that the planning of these buildings must be as elastic and convertible as possible.

The point made of the advisability of building only temporary and removable structures for manual and domestic subjects is one which may not have struck many of us, but there is much to be said for this, if schools are to be readily adapted to the changing needs of the moment. Upon this point we should merely remark that it is an unfortunate fact that temporary structures erected under official control are frequently extravagantly built, and cost as much as a cheaper form of permanent building; a fact which discounts the apparent economy in principle. We might also wonder, perhaps, how many times a temporary building can be economically dismantled and re-erected, and whether the principle of saving on paper is not wiped out in practice. These are considerations, however, which do not prejudice the thoughtfulness of Mr. Sargent's comments.

Of the revolution in school planning from the central hall to the quadrangle principle, Mr. Sargent is fully alive. We still have headmasters who regret the passing of the central assembly hall round which are grouped the class rooms, and who still firmly believe in the old arrangement as ideal for the purpose of supervision. Considerations of lighting and ventilation have turned the scale towards the quadrangle plan, and when we remember the actual uselessness of the hall for the purposes of singing or class work during class hours, we need wonder no more than Mr. Sargent that this old type has passed out of favour.

With a second paper by Mr. A. H. Seymour, dealing with the scientific aspect of school planning, we are less favourably interested. There is no doubt that a good deal of study and research has been carried through to produce the data presented, but it seems to us to have stopped short of the point of useful application. Science, with all its advantages, has but yet scratched the surface of the universe, and we must always accept with reserve the results which exact science is able to put before us. Without in any way belittling the research of the scientist who has made so many things possible to us which were denied to our fathers, as architects we shall continue to rely on a certain modifying instinct of art to temper the cold facts of science. If we may say so, we should say that the school buildings of the past few generations owe their dull spirit to the too rigid observance of rules and regulations based on scientific theories, and untempered by the free spirit of the artist. Let us by all means light, heat, and ventilate our schools in the most efficient manner possible, but do not let us imagine that these facts alone can determine the lines of a building designed to give the manhood of the future their first experiences.

So long as we look upon the average boy as a fixed quantity, the product of mass production, so long shall we continue to express schools as factories. Therefore, while commending most cordially the research and industry upon which Mr. Seymour has based his paper, we turn with more sympathy to the warmer and more human spirit which pervades Mr. Sargent's. The two papers together are described by Mr. A. E. Henshall in his foreword as:—"... an attempt to examine quantitatively the elements which determine comfort in school. It may perhaps be regarded as a contribution by the teachers to the problem which faces all authorities of reconciling the rival claims of economy and efficiency." We can do no better than record that this aim is well attained and to echo his confidence that the pamphlet will be well received.

* SCHOOL BUILDINGS.—Papers written by John Sargent, M.A. Director of Education for Essex, and A. H. Seymour, B.Sc., National Institute of Industrial Psychology, with a foreword by A. E. Henshall, President, National Union of Teachers, and presented to the meeting of members and officials of Local Education Authorities at the Folkestone Conference of the N.U.T. 1932.

NOTES

The R.I.B.A. London Architecture Medal, 1931.

The jury entrusted by the R.I.B.A. with the award of the London Architecture Medal, after careful examination of drawings and photographs of all the buildings which were nominated for the honour, have given their award in favour of St. Margaret's House, 19-23, Wells-street, W.1, designed by Messrs. Richardson & Gill, FF.R.I.B.A. The Medal, as our readers will remember, is awarded annually to the architect who has designed a building of merit completed during the three preceding years within the County of London. From the photograph which we publish this week it will be seen that the building while "modern" in the right sense of the word, inasmuch as the façade is a logical expression of the structure, is free from any kind of eccentricity and shows a regard for traditional character and correct proportions. Messrs. Richardson & Gill are to be congratulated on the production of a work of distinction.

A Suggested Defacement.

Mr. Arthur Keen writes to *The Times* in reference to Waterloo Bridge :—"The proposal of the Improvements Committee of the L.C.C. to obtain an estimate for substituting steel construction for pier No. 4 and its two crippled arches appears to have gone unchallenged, perhaps because the possibility of such defacement of a great work of architecture can hardly be taken seriously. A definite protest should, however, be made, for such treatment of the bridge would be intolerable." Mr. Keen further writes :—"As various tenders are to be obtained I suggest that, in order to clear up misunderstandings, information should be given as to the cost of the following :—

(*a*) Rebuilding four piers and five arches and underpinning the other piers in free air as recommended by the Royal Commission.

(*b*) Rebuilding the two broken arches and pier No. 4 and underpinning the rest in free air.

(*c*) Underpinning all the piers by tunnelling in compressed air, reconstructing the two broken arches, and refacing both ends of pier No. 4.

"In each case the further cost of widening by corbelling should be stated. As pier No. 1 has sunk to the extent of only about half an inch since 1820 it might be omitted from all the estimates. Cost cannot be the only consideration, because the convenience of traffic on and under the bridge is important and must be taken into account. The roadway should be kept in use while the work is done and the waterway should be as little obstructed as possible."

Sky-Writing.

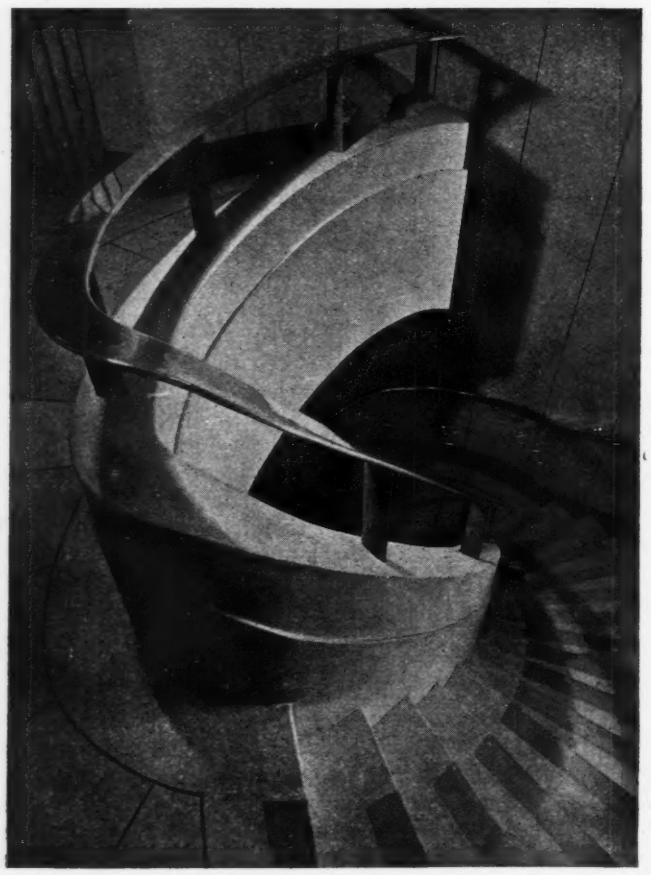
The Select Committee appointed to inquire into the question of sky-writing has reported that it should not generally be prohibited, but that it should not be allowed in rural areas or within a radius, to be defined by the Secretary of State, of any ancient monument or building of historic importance From the summary of the report, rural areas appear to be defined as boroughs or districts with populations of less than 20,000, but if this is the actual wording in the report, the word "district" by itself is too wide in latitude, but what no doubt is intended is permission in urban districts. It is also suggested that sky-writing should be prohibited on Sundays. It appears that the Committee did not suggest statutory authority, but only statutory control, but what appears the most difficult point in the report is the recommendation that "if sky-writing is to be brought under statutory control it must be protected from vexatious actions." If statutory powers are given to any body, unless special rights are conferred in the legislation, no action for nuisance can be brought unless the statutory powers are used negligently, negligence in this sense including the omission to use every reasonable device to prevent nuisance (see Farnworth *v.* Manchester Corporation—*The Builder*, December 27, 1929), but where the terms of the statute are only permissive, then the inference is that the Legislature intended that the use of the general powers thereby conferred should be exercised in strict conformity with private rights (see Asylum District *v.* Hill, 6 App. Cases, 193).

Hoardings and Sky-Signs.

The Committee expressed the pious opinion that this new form of advertising might prove less offensive than brilliantly lit signs on hoardings or buildings, but it is obvious that it is possible for most individuals to get away from hoardings and buildings, and that the nuisance is localised to those dwelling in their proximity, but that will not be the case with advertisements in the sky, and far from limiting private rights of objection to the proposed new form of advertising, we should have thought that the rights of individuals and the public should be strictly guarded. It is somewhat curious, when we consider the steps that have been taken to try to obviate the disfigurement of the country and towns by advertisements on *terra firma*, that its extension to the sky should be so calmly accepted, and certainly this suggestion of preventing actions from being taken will have to be strictly scrutinised. Almost every action for nuisance is capable of being described by someone as "vexatious," and what is intended by this expression in the Report will have to be ascertained.

The Design of Schools.

Banks and public-houses are the finest examples of the architect's art, according to Mr. John Sargent, Director of Education for Essex, who contributes to a pamphlet on "School Buildings," recently published by the National Union of Teachers and dealt with in our "Leader." "It is difficult to see," he writes, "why the buildings in which we keep our money or our beer should be either finer or fitter for their purpose than those in



The "Daily Express" Building, Fleet Street, E.C. : Staircase.

Messrs. Herbert O. Ellis and Clarke, FF.R.I.B.A., Architects.

Farmyard at Pont-l'Evêque, Normandy.

From a sketch by Mr. T. E. Eccles, F.R.I.B.A.

which we keep our children. If some dispensation of Providence would destroy the greater part of our school buildings every twenty-five years, it might be on the balance not entirely regrettable." With this the architectural profession would, we feel sure, be in agreement, and hardly less so with Mr. Sargent's views upon the influence of architecture upon the adolescent mind. "A school building should not look like an institution or a hospital or the unsanctified version of some ecclesiastical edifice, but should suggest a place in which children work and play and are happy. After all most of us are influenced consciously or unconsciously by our environment, and we have to remember that for many children in many areas the sole standard of æsthetic values, the only criterion of beauty, is the one which is set in and by the school." The pamphlet (which contains a close analysis of existing school conditions) is a contribution by the teachers to the problem which faces all authorities of reconciling the rival claims of economy and efficiency.

The Timber Problem. The Secretariat of the League of Nations has published under the title "The Timber Problem: its International Aspects," a pamphlet which contains the report of the Delegation instructed by the Economic Committee to consult experts on timber. The experts met at Geneva in April. They were called upon to examine the world situation in relation to timber production and the timber trade, and to study the action which might be taken on international lines to improve the situation. After endeavouring to determine the causes of the crisis in the timber trade and noting more particularly that the crisis is due to a marked lack of balance between production and consumption, the experts came to the conclusion that the present circumstances spoke in favour of agreement between exporting countries in regard to the quantities to be exported. The experts envisaged special negotiations between the experts of the northern countries as well as a conference of the exporting and importing countries concerned. The latter conference has already been held. It took place at Vienna within the last few weeks. The pamphlet which has just been published contains as an annexe information on the position of the timber trade and industry furnished by experts of the following countries: Austria, Canada, Czechoslovakia, Estonia, Finland, France, Germany, Italy, Latvia, Poland, Roumania, Soviet Republics, Sweden, Switzerland and Yugo-Slavia. It also contains statistical data on the timber export during the past few years, from which the fact becomes clear that imports of sawn timber into England have steadily declined from 9,137,000 cubic metres in 1929 to 8,633,000 in 1930 and 7,608,000 in 1931. This decline is mainly due to the economic depression, the timber market being largely dependent on such industries as the building trade for doors, partitions, boards, etc. The report states: "Consumption has also been curtailed by the considerable reduction in the size of modern houses and rooms, and by the fact that, for building purposes, such materials as cement, iron and steel, plaster, bricks, etc., have to a large extent taken the place of timber. Timber is being increasingly replaced by iron and reinforced concrete in the construction of buildings, bridges, etc. Metal furniture is also becoming popular. When timber prices were on the upgrade, other materials were readily substituted. In certain cases, current fashions have also led to woods being replaced by marble, wrought iron, metal, etc." The report is issued by Allen and Unwin, price 1s. 6d.

Our Timber Supply and Trade Value. Does the very extent of the resources of our Empire beget a serious disregard of our opportunities? Mr. Alfred C. Bossom, M.P., has done a service in calling attention to our negligence in this respect and urging that we make the most of the great timber supply of the Empire. At present we draw over 90 per cent. of our timber from Russia, Finland, America and Sweden. Much less than 10 per cent. reaches us from the Dominions and the Colonies or is had from our home supply. From the British point of view, he says, timber is one of the "many cases where we have been accustomed to procuring from foreigners a prime raw material that the Empire is abundantly able to supply. Clearly it would be good business for both parties if an arrangement could be come to by which Britain would buy, say, three times as much Empire timber as at present, while the Empire bought three times as much British merchandise."

The Encouragement of Rural Industries. An instructive lecture on "The Organisation and Development of Rural Industries" was given before the Royal Society of Arts recently by Mr. J. R. I. Brooke, M.B.E., director of the Rural Industries' Bureau, from which some idea of the excellent and far-seeing work being done by the Bureau in reviving rural crafts and reorganising them in the light of modern needs is to be gained. One of the special lessons which the Bureau teaches is the need for the village craftsman to take advantage of up-to-date methods. As an example, acetylene welding has been introduced, with the happiest results; again, craftsmen have been urged to take on new trades. The Rural Industries Bureau believe that rural industries should be financed locally, and be organised round a small headquarters, but a word of warning was given by Mr. Brooke:—"Although we have few crafts to revive and though the very word craft has gone to the bad in England, we can learn one lesson from Sweden. The Swedes have refused to seek after commercial success without regard to design and workmanship, and the fact that an article is selling well does not induce them to foster it by including it in their exhibitions. They have never let commercial considerations affect the standard they set, and they now have their commercial reward." Finally, the following very useful advice was given:—"In the town house of the future, perhaps, only chairs and tables will be movable; the rest of the furniture will be fitted, and the young married couple in a few years' time will have very little to buy, for the lighting, too, will be indirect and built into the house. In country districts this will take longer to come, but the cabinet-maker, carpenter and smith, who come to us more and more for designs for furniture and fittings, must not only make small pieces of wood and metalwork to serve as the enrichments of a room, but must capture from the builder the making of the fitted furniture for new houses, and in making this they must show such craftsmanship that architects will be bound to employ them."

GENERAL NEWS

Sands' Memorial Fund.

A fund has been opened with the object of perpetuating the memory of the late Mr. Hubert C. Sands, F.S.I., L.R.I.B.A., A.M.T.P.I., and a committee, representative of the Polytechnic, the School of Architecture, Surveying and Building, and past and present students of the Surveyors' and Auctioneers' Section, has been formed for the purpose of providing the necessary administration for the creation of a memorial. It has been decided that the memorial shall take the form of an annual prize to be awarded, in competition, to past and present students possessing the qualification for membership of the Polytechnic Surveyors' and Auctioneers' Association, the value of the prize being governed by the amount of interest derived from the investment of the proceeds of the appeal. The project has the cordial support of the President of the School, Sir Banister Fletcher, F.S.A., P.P.R.I.B.A., F.S.I., and the following members of the School Advisory Committee :—Messrs. G. Topham Forrest, F.R.S.E., F.R.I.B.A., F.G.S., Cuthbert Lake, F.S.I., F.A.I., A. W. Davson, F.S.I., and also the Head of the School, Mr. G. A. Mitchell, F.R.I.B.A. Subscriptions may be sent to Mr. F. C. Renny, hon. secretary and treasurer, 1 and 3, Powis-street, Woolwich, S.E.18.

R.I.B.A.

At a Council meeting of the R.I.B.A., held on Monday, July 4, the following members were elected :—

As Hon. Associate.
Sir Lionel M. Jacob.

As Hon. Corresponding Member.
Eugenio P. Baroffio.

As Fellows.

H. P. Cart de Lafontaine.	Laurence Kennard.
Hubert Clist.	H. T. O'Rourke.
T. F. Ford.	

As Associates.

F. K. Aitken.	Marjorie Miles.
R. C. D. Boger.	Rachel J. Richardson.
W. K. Cook.	D. B. Smith.
N. W. Goodacre.	D. S. Taylor.
A. T. Longland.	W. J. C. Turner.
Neil MacLeod.	Denis Winston.

As Licentiates.

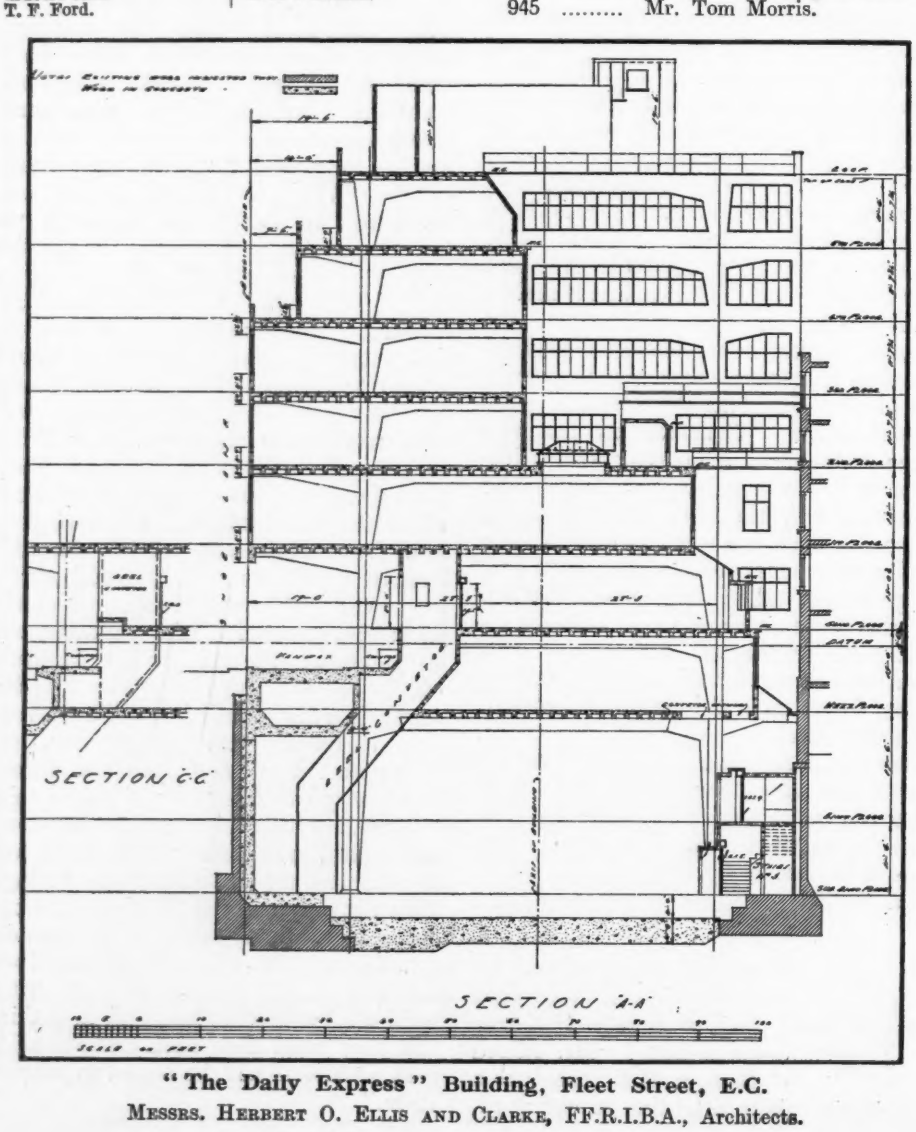
H. E. Bailey.	H. B. N. Nixon.
E. S. Barr.	J. W. Penny.
J. J. Blake.	H. J. Ramus.
R. J. Buck.	I. H. Salonika.
S. I. Chermayeff.	H. W. M. Sarel.
C. M. B. Hinderer.	G. H. Scholefield.
E. W. Jackson.	Thomas Tatam.
S. H. Lawrence.	P. H. White.
P. S. B. Nicolle.	

COMPETITION NEWS

I.A.A.S. English Cottage Competition.

The assessors in this competition, Sir Edwin L. Lutyens, K.C.I.E., R.A. (President I.A.A.S.), assisted by Sir Robert Tasker (Vice-President, I.A.A.S.); Mr. John Murray, F.R.I.B.A., F.S.I., F.I.A.A., and Mr. Andrew Mather, F.I.A.A., have made the following awards :—

No. of Premiated Design.	Author (or authors).
75	Mr. E. J. Wood.
108	Messrs. Smith and Gale.
140	Mr. William Sinning.
188	Mr. P. D. Hepworth.
241	Mr. F. W. Dark.
255	Mr. Joseph Hill.
323	Mr. Hubert Lidbetter.
330	Messrs. Walcot, Burton and Walcot.
396	Messrs. Goodman and Kay.
637	Mr. W. Falgate.
659	Mr. R. D. Robson.
672	Mr. John Cocker.
766	Messrs. Rose and Abram.
826	Mr. H. T. Townsend.
865	Mr. F. Worthington Simon.
945	Mr. Tom Morris.



"The Daily Express" Building, Fleet Street, E.C.
Messrs. Herbert O. Ellis and Clarke, FF.R.I.B.A., Architects.

The competition attracted 1,133 entries. A public exhibition is now being held at Messrs. Selfridge's premises in Oxford-street.

The inception of the competition was as follows :—The Incorporated Association of Architects and Surveyors accepted an invitation from the Dominion Dairy Co., Ltd., of Aylesbury, to submit sixteen selected designs for a traditional English cottage in a rural setting, capable of being erected under modern by-laws. The promoters offered sixteen prizes of £21 each for the sixteen designs selected by the assessors. The Dominion Dairy Co., Ltd., may commission a competitor (or joint competitors) to act as architect to supervise the erection of a cottage or cottages of the chosen design or designs at the recognised scale professional fees.

BARTLETT SCHOOL OF ARCHITECTURE

An exhibition of work of the Bartlett School of Architecture of the University of London, Gower-street, is now on view at University College. The standard of work under the able direction of Professor Richardson and an efficient staff has rapidly advanced. The drawings shown are the work of first year to fifth year students. Generally the work is of a meritorious standard. Amongst the exhibits of the first year students are some excellent and painstaking drawings of the Orders. In some instances a single cap is shown, and in others a composition. Of the prize work exhibited, the Concrete Publications prize of £10 is divided between Mr. Andrew G. Wise and Mr. H. Burton—fifth year students. The subject, "A Concrete Swimming Bath," is thoroughly worked out both in plan and working details. The plans of the two competitors are different in layout, but on points they are equal, and so divide the prize. Another subject is "A Country House to Cost £40,000," for which Mr. Peter B. Dunham is awarded the Diploma prize. This design shows thought and care in the placing of the various apartments, and the exteriors are nicely proportioned. The students are encouraged to design in the style of the country of their origin. Mr. Maung Maung's design is in the Burmese style. We understand that this plan is adopted so that when students return to their native countries they may continue to design in their own traditional style instead of in bad English, which is often unsuitable to their own climate. The Bossom Medal for "A Railway Station" is won by Mr. F. E. Kerswill, who has produced a practical scheme, with provision for fast and suburban traffic. For a chapel twenty-five designs were submitted, the style being left to the competitors. Some capital designs have been produced. Honourable mentions have been awarded to Miss Hamp and Mr. Colt. For "An Agricultural Research Station," Mr. H. G. Goddard and Mr. J. C. Price divide the honours. Their designs are in brick, and show a good sense of proportion and a severely practical character, as they should. Some good designs for a block of flats are on exhibition. In addition to the works mentioned, the University have a School of Decoration, and the examples on view show some original ideas—modern, but devoid of freakishness. Models are also to be seen. Below is a list of prize winners for the Session 1931-32 :—

Donaldson Silver Medal : P. B. Dunham.

Prize for Design in Ferro-Concrete : 1, H. A. E. Burton; 2, A. G. Wise.

The Builder Prizes : 1, P. B. Dunham; eq. 2, J. R. Hilton and A. G. Wise.

The Bossom-Davis Medal : A. G. Wise.

The Alfred Bossom Medal : F. E. Kerswill.

Architects' Journal Prize : R. H. C. Finch.

Herbert Batsford Prize : N. E. Block.

"Building Prize" : eq., H. G. Goddard and J. C. B. Price.

Institute of Clayworkers' Prize : A. G. Nisbet.

CORRESPONDENCE

[While we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

Architects and Alleged Illicit Commission.

SIR,—It is not unnatural that Mr. Maurice B. Adams should be horrified at what he obviously believes to be a gross libel on a great profession. But Mr. William Davidson using the plural sees in it an explanation why certain contractors have had the temerity to invite him to join them in criminal acts. One may well imagine the glee with which the author of the statements to which Mr. Adams directs our attention will welcome this unexpected confirmation of them.

What it all really amounts to is that on the fringe of the profession there are many unqualified men calling themselves architects who, in order to exist at all, supplement the odd guinea or two they are able to extract from ignorant or greedy or misguided clients when opportunity offers. But though many (and too many) compared with the great body of honourable men making up the entire profession, they are but few. And the whole thing has been magnified in the manner which is typical and customary amongst certain sections of writers pandering to an unhappy appetite for cheap sensationalism.

XAVIER.

Where Architects Must Be Registered.

SIR,—Major G. B. J. Athoe's letter on this subject is interesting, but he makes no mention of the educational qualifications attached to the conditions of registration in Nova Scotia. One would naturally think that this is of greater importance than the mere question of registration. Further information on the education of the architect in Nova Scotia might be useful before we assume that they are ahead of us, as Major Athoe seems to suggest. The exemption of civil servants cannot be considered a desirable feature and appears anything but a progressive step.

WILLIAM DAVIDSON.

Council Houses.

SIR,—Sir Francis Fremantle's letter makes a rather sweeping assertion about the black-coated and professional classes. I thought that council houses were built to help the housing problem generally (so far as the cheaper houses were concerned), not necessarily for manual labourers only.

What often happens is that these houses are not only subsidised for rent, but the black-coated workers and professionals have to subsidise the rates as well. I know cases where the rateable values of the more expensive houses have been increased, but the less expensive left alone, and there have been rate defaults on these latter, making in effect a double rate subsidy. Then, when tenants are moved out, redecoration usually takes place with further rate money. Some councils, if the reliable tenants moved out from the more expensive houses into ordinary private houses, would look rather silly.

I cannot understand this attitude. If one complains about subsidising other people's children for schooling, the reply is that if one does not make use of the State school, one has no cause to grumble. Snobbery is said to be to blame. On the other hand, if one uses a council house, one is a parasite.

From my experience of a good many council houses, I should say that not a few "black coats" and professionals will be only too delighted to vacate them. Probably the fact that house-hunting is a weary business, and they have not much spare time, is the only reason why they stay. As for an economic rent, the only rent obtainable is the present-day letting value. What the house costs is neither here nor there.

EX-TENANT.

Seasoning of Timber.

SIR,—In view of the difficulty of obtaining timber which will stand the dry atmosphere of centrally heated buildings, we give particulars of our experience, which may be of benefit to others, and encourage the use of careful, scientific methods rather than the haphazard practices which cause much unnecessary trouble.

Architects and builders should provide themselves with a hygrometer for testing the humidity in buildings, as good joinery is often spoiled by fixing in damp buildings, and also a timber-testing oven for testing the water content in timber. The former costs about £4 and the latter £7. By means of the timber-tester an architect can ascertain in a few hours whether timber is suitable for use or not. It avoids having to rely on what is at best only very fallible judgment. Any intelligent pupil can learn in a few hours how to carry out tests. When we think of the trouble which improperly seasoned timber has caused, and that all this may be prevented by scientific tests, the advantage is at once apparent.

Moisture content in timber is measured by weight as compared with the weight of the timber when it is perfectly dry. Joinery in a dry, centrally heated building comes in time to a moisture content of about 10 per cent. As a result of many tests, we have come to the conclusion that no joinery wood should be used in such a building with a higher moisture content than 12 per cent. As a result of tests extending over a year on good timber, well seasoned naturally, we have come to the conclusion that it is impossible to guarantee naturally shed-dried timber for joinery in centrally heated buildings, as such timber in August and September, after a favourable summer, has a moisture content of about 14 per cent., but the same timber in January has a moisture content of about 17 per cent. to 19 per cent. These results are the best that a good shed-drying can attain, and are not suitable for modern requirements.

We therefore installed a kiln adjoining our works, and a large store centrally heated. In the kiln all timber is seasoned to the exact moisture content desired and is then taken into the centrally heated store, where it is kept in the best condition until required. We consider it is only a matter of time until all building contractors who cater for good joinery will instal similar plants, and for the good of the industry we shall be very pleased to show architects and joinery manufacturers over the works and to give them the benefit of our experience.

For JOHN LAING AND SON, LTD.,
J. W. LAING.

Financing Building.

SIR,—With reference to the paragraph under "General News," headed "Financing Building," appearing in your issue of the 8th inst., it may interest you to know that the Building Industry Council of Review has for some time been considering the possibility of the extension of certain forms of private and public financial assistance to building enterprise generally.

In reference to this, my Executive Committee, at its meeting held on 30th ult., decided to get into touch with representative building societies with a view to exploring the possibility of extending the financial facilities of these building societies, now somewhat confined to house building, to commercial and industrial buildings.

Should these endeavours prove successful in any way, the findings will, no doubt, become the subject of a early interim report by my Council.

H. B. BRYANT, Secretary, the Building Industry Council of Review.

"Gravity and Glue."

SIR,—The main cause of excessive building costs is the reliance still placed, after countless centuries of building, on "Gravity and Glue"—"Gravity" in the form of heavy brick and stone, and "Glue" in the form of cement. Surely in this era of concentrated scientific development we can place our reliance on the nut and bolt, glass and cork of the ultra-modern constructor. A stimulated demand for these materials would bring down their price with a run, and the infinite variety of their assembly would allow the architectural fraternity to be fancy-free in their designs.

V. J. COOPER.

"THE BUILDER" DEBATE

LII.—BUILDING COSTS.

SIR,—I take it that "Positive's" remedy is to lower the wages of the building workers one penny per hour, and that this would bring down building costs.

"Positive" regards my statement that £9,000,000 a year is paid out in relief to unemployed in building trades as wrong. I quoted these figures from the leading article in "Reynolds' Newspaper" for February 14. The same newspaper, dated January 24, stated that there are 330,000 unemployed in the building industry. Since that date things have become worse; more men are unemployed, and more have gone off unemployment pay on to relief. Therefore I think we can safely agree that the payment of £9,000,000 a year in relief is a moderate estimate.*

My point is that £9,000,000 spent on building houses at £500 each would produce 18,000 in one year, and we could give them away rent free. This would put a few thousand men at work for a year, and their purchasing power would be increased. On the other hand, what is the Government getting in return for the £9,000,000 paid in relief?

Before the war houses were built and sold for £250 to £300. To-day the selling price is roughly from £600 to £725, and higher if it can be obtained. Wages in the building trade before the War were 10d. to 11d. per hour. To-day they are from 1s. 8d. to 1s. 9d. per hour—about double. Perhaps "Positive" can now see how reductions in cost may be secured. He must not forget there was a profit on the £300 house before the War.

I do not notice that "Positive" mentions the plasterers', bricklayers', and other craftsmen's price for labour in proportion to the selling price of the house, but I do notice that the building societies turn away much capital offered, though houses are urgently required.

H. MARTIN.

* [We believe that our correspondent is in error on this point. The figures at June 25 were 219,986.—ED.]

The Henry Kingsley Memorial, Cuckfield.

The following particulars concerning the Henry Kingsley Memorial, erected in Cuckfield Churchyard, are sent by Mr. Arnold Whittick:—Shortly after the centenary of Henry Kingsley's birth on January 2, 1930, an appeal was made by the President of Magdalen College, Oxford, Sir Arthur Quiller-Couch, and others for subscriptions for a memorial to be erected over the grave of Henry Kingsley at Cuckfield. Sufficient was subscribed by the spring of 1931, and the work was completed a short time ago. The memorial takes the form of a monolith, 9 ft. high, rising from a series of bases. At the summit on the east and principal side a cross is formed by sinkings, and in the corresponding place on the west side a burning lamp is carved. The inscriptions are in Roman incised letters. That on the east face states that the memorial is to the memory of Henry Kingsley and was erected by some of his admirers. The inscription on the west face gives the particulars of Kingsley's birth, death and burial. On the chamfer of the large bottom base are inscribed the titles of Henry Kingsley's novels, such old favourites as "Geoffrey Hamlyn" and "Ravenshoe" appearing on the east side. The memorial was designed by Mr. Arnold Whittick and executed in Roman stone by Messrs. Phillips and Son, of Brighton. We illustrate the memorial on page 79.

THE CHURCH OF ST. MARY THE VIRGIN, EATON SOCON, HUNTS.

Two years ago this magnificent old church suffered almost total destruction by fire. The unexpected disaster came at a time when the attention of the diocese of St. Albans was directed to the ruinous state of many of the Huntingdonshire churches. It was in the nature of a blow, when funds were needed for immediate repairs to other buildings in all directions. The parishioners of Eaton Socon wisely sought the aid of the Bishop's Advisory Committee and determined to rebuild their church as it stood before the fire. The result has been to save at least 75 per cent. of the original stonework and to preserve for posterity the form and structure of one of the most interesting churches in England.

Eaton Socon, with its hamlets, is a place of great antiquity. The name is associated with the Beauchamp family, whose lands were eventually attached to the barony of Bedford. Soon after the compilation of Domesday Book, Eaton Socon, already renowned for its water mills, attained status by the erection of a castle, and early in the twelfth century a stone church was built. The fire revealed many things that the intervening centuries had obscured. Search among the debris brought to light numerous fragments of Norman work. It was found possible to reconstruct a portion of the great west door and to ascertain the type of window treatment of the original building of the twelfth century. Such external evidences go to prove that the first church consisted of a nave and a chancel roofed, in all probability, with reed thatch. The west gable was finished, according to antiquarian research, with a stone belfry. In the thirteenth century, alterations were made within the chancel. These alterations included some early-English windows and a sedilia. A hundred years later, probably about 1320-30, it was decided to rebuild the church on a grander scale. The chancel was retained as an annexe to a new nave, 77 ft. in length. At the same time, north and south aisles were added, with a new belfry over the west end. The Norman work was utilised to form part of the reconstruction, many fine pieces of worked stone being built into the walling. These were revealed in 1930. The second church, with its graceful arcades and steeply pitched roof, was again thatched with reeds. It will be of interest to many to know that a fragment of this thatching was discovered built into the wall at the junction with the chancel arch. The aspect of the church from 1325 to about 1470, or earlier, can be judged by comparison with the interesting church at Long Stanton, in Cambridgeshire, which is of similar date and has never been altered.

Further alterations took place about 1470. At this period the chancel was built, the nave walls were heightened for clerestory lighting, and the finely proportioned west tower was added. With the exception of the nave arcades and the large window at the west end of the south aisle, as well as the doors in the north and south aisles, the church was now consistently Perpendicular in character. At the same time, additions were made to the fitments, such as the wood screen and the benches with finely carved poppy-heads. It can be assumed from documentary and other evidence that from the time of the Reformation to the time when the church was restored in 1868 its appearance was substantially as left by the fifteenth-century builders.

The fire of 1930, which began with a defective flue in the furnace chamber, completely ruined the structure. All the timber roofs, carving, rood screen, furniture and fitments were consumed. The tower was gutted, and the bells, some of which dated from the seventeenth century, were destroyed. The damage was even greater than at first feared. Stonework was calcined, walls were tottering, the chancel a mere shell. The window tracery was burnt through and through, and the gutters were choked with molten lead. At first it was thought that the whole structure would have to be demolished and a church of smaller dimensions schemed. Fortunately the advice of the Advisory Committee was taken, an architect of much experience was commissioned to report, and, acting on expert advice, a decision was reached to rebuild on the former lines.

For two years the churchyard at Eaton Socon presented the unusual spectacle of a building works. There has been, in other words, a return to mediæval methods. Walls were shored and secured; all the debris was sorted and the worked stones numbered and selected. Everything that could be saved from the wreckage was marked for future use. New Weldon stone was brought to the site in bulk and worked on the spot by masons skilled in geometry. The best English oak was purchased from Suffolk and brought to the church to be worked on the ground with the adze. Gradually the building assumed its mediæval form. Within a year of the fire the chancel was ready for Divine service, and about this time the tower was repaired and a new peal of bells had been cast. During the whole of 1931 work proceeded in the nave. A great achievement of structural repair was accomplished in the retention of the whole of the south arcade, which, in the words of an interested onlooker, was held in space while the slow operation of building new arches and piers went on.

Eventually, when the reconstructed walling was sufficiently advanced, the roof timbers were placed in position. Finally, the roofs were boarded and covered with copper sheathing, especial precautions being taken to ventilate the timbers and to tar the extremities against the death-watch beetle. There has been no finer evidence of the skill of country craftsmen than has been observed during the rebuilding of this church. The men, from the clerk of works, the foreman, the masons, the carpenters and others, have given of their best. They have worked as the old guildsmen worked in the Middle Ages, taking their meals in the vicinity of the "Traysour," *i.e.*, the tracing house.

Visitors to Eaton Socon will be interested in such features of the reconstruction as the new rood screen and gallery, the parclose screens, choir benches, pulpit and other examples of modern craftsmanship, the sculptured decoration and the stone reredos, by Mr. P. G. Bentham, being exceptionally fine. The fire has given scope for the skill of a happy band of workers following the direction of the visiting architect, who personally supervised the rebuilding. It was felt that the church would gain in interest if a few of the best examples of church furniture of historic value were included. Such fitments as a 17th century lectern, 17th century chairs, settles, sanctuary lamp and processional cross, as well as a fine 17-century Flemish tapestry, depicting the martyrdom of Saint Alban, enhance the beauty of the interior. It will be of general interest to learn that the Norman font which belonged to the first church has been carefully repaired and set up in the position assigned to it in the fourteenth century.

Eaton Socon has every reason to be proud of the work it has sponsored in reconstructing the parish church. The proportions of the old building have been preserved and a rich simplicity secured. The building embodies all the crafts of the Middle Ages. Messrs. Dove Brothers, of Islington, were called upon to undertake the preliminary heavy shoring which saved the remainder of the original building. It is a tribute to their skill that this work was undertaken at 24 hours' notice. Messrs. Samuel Foster and Sons, of Kempston, were responsible for the main building, the reparation of the tower being undertaken by Mr. Hartop, of Eaton Socon. Mr. Ling, of St. Neots, carried out the heating installation, and Messrs. Christy, of St. Neots, were responsible for the electric lighting. Mr. Mann, of Ampthill, was clerk of works, and he prepared the full-sized setting out drawings on the site for all trades.

Messrs. Richardson and Gill, FF.R.I.B.A., of 41, Russell-square, London, were the architects.

Wearmouth Parish Church.

An anonymous donor has given £30,000 for the restoration and extension of Bishop Wearmouth Parish Church, Sunderland, which has a history extending over nearly 1,000 years. A further sum of £6,000 will, it is stated, also be received from the Wearmouth Coal Co., as compensation for damage to the existing church building caused by colliery workings.

The Church after the Fire.

THE "DAILY EXPRESS" BUILDING

REVIEWED BY L. W. THORNTON WHITE.

THE simplification of Fleet-street, architecturally, grows apace. During the past decade much of the worried little building which congested the scene with tiny, imitative form has disappeared to make way for larger and broader conceptions. Fortunately, the best of these new buildings find themselves on the north side of the street, where they assemble on the sweeping curve which brings into view the dome of St. Paul's. The rejuvenate new takes the place of the senile middle aged on the visually most important sites. It is beyond all idealistic imagination to expect that Fleet-street should develop architectural unity, but the current tendency to increase scale and decrease complicated form—to express the combined purpose of a syndicate rather than compile the summarised views of small individuals—is perhaps an improvement on the existing chaos. It is a distinct improvement, too, to clear away a rainbow rash of paint and poster and to introduce concentrated points of colour in clock or entrance doorway. Wren's dominating work may lose a little in scale on the completion of this transitionary process, but by contrast it will undoubtedly gain in richness of composition. The new buildings in turn will gain by reason of their contrast with, and lack of imitation of, the masterwork of Wren. We may soon see an architectural Fleet-street living, for some short period, in a state of happy compromise!

The youngest and brightest of the newcomers is undoubtedly the new "Daily Express" building, designed by Messrs. Herbert O. Ellis and Clarke, FF.R.I.B.A., with Sir Owen Williams as consultant for the structural framework, and Mr. Robert Atkinson as designer of the entrance hall. The new building is an extension of the existing newspaper premises in the rear, and has a frontage to Fleet-street of 84 ft. and a return depth along Shoe-lane of some 120 ft., exclusive of the old work. It rises on the centre line to a height of 95 ft. above the pavement and sinks below ground to a depth of some 40 ft. Up to first-floor level there is a deep set-back to provide a private vanway from Fleet-street within the confines of the site, the upper floors being cantilevered over this vanway, leaving a clear area entirely free from stanchions. The main entrance is in the centre of the Fleet-street frontage and leads to a generous entrance hall. The hall is planned to accommodate in an open manner an inquiry counter, waiting area and public office, connected by telephone to all parts of the building. The richness of the hall is amazing; it is so full of colour and brightness that the eye is taken by surprise—it discovers a dual focus in the two modelled panels representing "The British Empire" and "Industry," the work of Mr. Eric Aumonier. A veritable riot of topical reference is revealed beneath the gold and silver leaf and bright touches of colour of these enormous reliefs. Above is a fibrous plaster ceiling of vigorous character, whose fluted silvered and coloured pendant centre is richly illuminated by concealed lighting in the sparkling surround. Walls as well as ceiling glitter in silver and spring-like green, but subdue themselves almost to a dull grey when approaching the "Birmabright" metal and gold leaf coffers encasing the concrete stanchions and main beam which swings across the hall. A small amount of simple wall surface is faced with highly polished slabs of travertine marble. Below, by way of contrast, the counters, telephone boxes and the dado running around the walls are faced with real ebony, divided into small sections by bands of chromium-plated metal strips, or Staybright steel—reflecting in the business fitments of the interior the business-like facing of the exterior. A rubber-covered floor, in a strong wave pattern, alternating in bright blue and black, divided by narrow green strips, links the two counters together. Upon this flooring rest chairs and stools of chromium-plated tubular steel, upholstered with emerald green leather, reflecting the soaring key of the wall and ceiling brilliance. The sombre uniform of the Corps of Commissionaires approaches, and one is transported from the scintillation of the showcase to a deep background of organised efficiency.

Immediately opposite the main entrance doors, a short central flight of stairs in black marble leads beneath a reminding clock to an exceedingly fine main staircase, giving access to the upper floors. Oval on plan, of generous width and "going," and given initial importance by commencing about 3 ft. above the entrance hall, this staircase must be one of the most impressive office stairs in England. It is well lighted so far as internal staircases go, but the lighting suffers a little in contrast with the daylight conditions of the entrance. Situated on either side of the stairs, immediately outside the oval well, are passenger lifts, leading from ground level upwards. Above are five floors of offices, each 11 ft. 7 in. high, floor to floor, with the exception of the first floor, which is 12 ft. 6 in. high. Above the level of the first-floor ceiling a large internal area, giving light to adjoining property as well as to this building, cuts somewhat awkwardly across the site. The fourth and fifth floors set back along the Shoe-lane frontage and the fifth floor alone along the Fleet-street façade, legal necessities which are excellently and economically managed on elevation. The roof is an asphalt-covered flat, on which the elaborate ventilation plants rest. These are enclosed within a screened wall treated as a windowless attic story, again set back behind the fifth floor below.

The final section of the work, joining the new building with the old, is not yet completed, so that the final allocation of departments has not yet taken place. Suffice to say that the small fifth floor contains the insurance department and the fourth the circulation and competition departments, all these

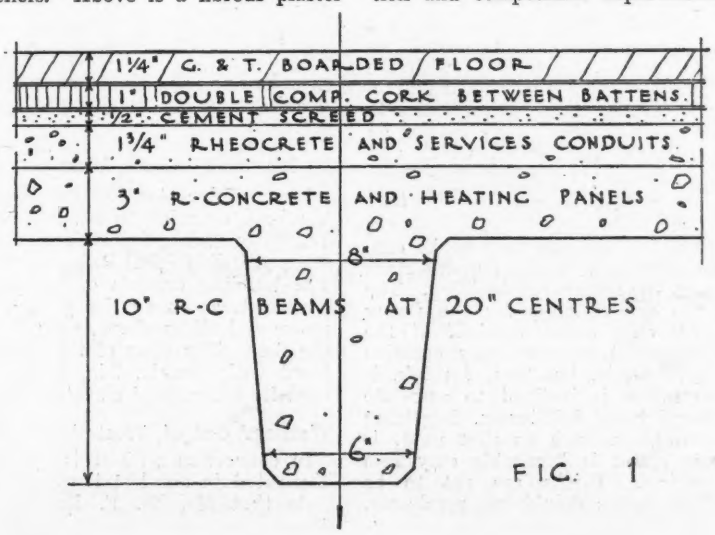

1¼" G. & T. BOARDED FLOOR
1" DOUBLE COMP. CORK BETWEEN BATTENS.
½" CEMENT SCREED
1¾" RHEOCRETE AND SERVICES CONDUITS.
3" R-CONCRETE AND HEATING PANELS
8"
10" R-C BEAMS AT 20" CENTRES
6"

FIG. 1

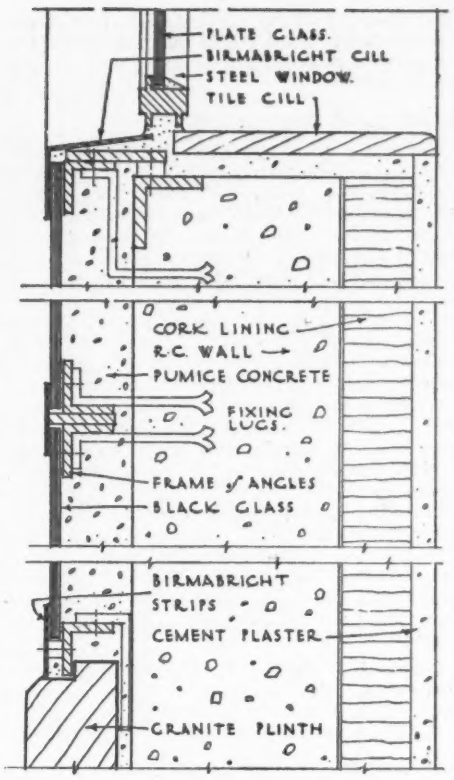


FIG. 2.

planned openly without dividing screens or partition walls. The third floor houses the managerial private offices along the main frontage, with the counting-house in the rear. The second floor is to be similarly divided to accommodate the editorial offices. At first-floor level the advertisement department is planned along the frontage, with the linotype room behind. Top light from the central area augments in this room the direct light from Shoe-lane. The main ground floor, lying behind the entrance hall, is 13 ft. high and is given over entirely to a newsprint reel store, with twin runway access from the private vanway along the side street, 6 ft. 6 in. below. Immediately beneath the reel store, in a mezzanine floor 13 ft. high, the publishing department is planned. Quick access along short conveyors connects the department to the open publishing counters along the Shoe-lane vanway. Conveyors set at a sharp angle deliver the reels from storage to the machine sub-basement. There is also a general purposes goods lift connecting the ground floor with the floors below. And so we reach the machine hall, the most important unit in the plan organisation of a newspaper building. The hall is entirely below ground, 29 ft. high and with a clear central area of 114 ft. by 58 ft. without intermediate supports. Its planning is clean and direct; it should be most efficient in working and exceedingly simple to supervise. Three rows of line-unit presses occupy the central area. At right angles to them, under the Fleet-street pavement, is arranged a resistances room, a control gallery and a visitors' gallery, in tiers one above the other. Clear views are readily obtainable along the lines of presses from any part of these galleries. The main switchboard, second only in impressiveness to the presses themselves, is arranged along the length of the spectators' gallery, from which it is divided by means of a glazed teak screen. This is an excellent example of good economical planning combined with a ready eye for showmanship which should not be lost on the visiting public. Ink and oil stores are to be found in the machine hall at high level, slung below the vanway, in which position they receive supplies direct from lorries. The weighbridge mechanism is also slung in like manner.

In addition to the main public staircase, six secondary staircases serve the building at various levels, three of them leading to secondary entrances in Fleet-street and the side lane. The visitors' gallery is connected to one of the latter and is also accessible from

a side doorway in the waiting area of the main entrance hall. Staff rooms and lavatories are housed in a side block connecting the old and new buildings.

Materials and Construction.

The entire structural members of the building are in reinforced concrete. There are only ten supporting piers, all placed well within the reinforced concrete retaining walls, some 40 ft. high, which contain the basements. Two of the main piers are on the Fleet-street building line, where they take the unusual shape on plan of a rectangle some 9 ft. long by 18 in. wide. The remaining eight piers follow immediately in line to the rear at 24 ft. centres with lateral spans of 58 ft. The reinforced concrete beams over these large spans are only 3 ft. deep up to first-floor level and only 2 ft. 6 in. deep above that level. I do not remember having seen elsewhere so small a ratio between depth of beam and span, centre to centre, i.e., 1 to 23, though in this case a fanning out of 8 ft. from the pier heads somewhat reduces the effective beam span. The external walls to the Shoe-lane elevation and the east boundary are carried on cantilevers from the main piers, in the former position with a 19 ft. overhang and 13 ft. in the latter.

Connecting the main reinforced concrete framework, the floors, over 24 ft. spans throughout, are constructed of lighter beams at 20-in. centres, generally 10 in. deep and 7 in. in average width. These carry a 3-in. slab of concrete, in the underside of which pipe grids are embedded for panel heating. Above is a 1¾-in. thickness of "rheocrete," which houses the various services, including the sprinkler installation, and above this again a ½-in. screeding takes 1-in. deep wood battens, fixed to "Bulldog" clips, to receive the 1¼-in Columbian pine floor of tongued-and-grooved boarding. The spaces between the battens are filled solid with 1-in. thick double compression cork slabs, for insulation purposes. In the linotype room pitch pine blocks are laid in place of boarding, while in the reel store the floor is finished with a 2-in. thickness of granolithic laid on the cork. Cork, battens and flooring are all bedded in bitumen. This interesting floor construction is clearly shown in Fig. 1. The floors to the offices generally are designed to carry a superimposed load of 100 lb. per foot super., 150 lb. to the linotype room and publishing department, and 224 lb. to the reel store. The flat roofs, similarly constructed, carry 56 lb. per foot super., though 224 lb. is allowed for where they support water tanks, ventilation plant, etc.

There are no "walls" at all to the two principal frontages. Thin reinforced concrete beams extend to a cill height of 2 ft. 9 in., above which are continuous windows of steel, glazed in plate glass generally, Vita glass to the managerial rooms and wired glass for fire resistance in close proximity to adjoining property. The reinforced concrete work is lined internally with a 2 in. thickness of compressed cork, and externally is completely covered by black glass, 5-16 in. thick. This glass is highly polished and specially toughened against breakage and high temperature—the manufacturers use similar glass in their furnace doors. It is supported, 2½ in. away from the concrete, on a zinc-sprayed framework of 1½ in. steel angles, bedded in mastic and bearing on strips of lead. "Birmabright" metal fillets, screwed through to the angle steel frame, cover all joints. The space between glass and reinforced concrete was subsequently filled with pumice concrete, to conform to solidarity requirements of the Building Acts. A small simple plinth is of black granite. Fig. 2 shows in further detail this unusual system of construction. The glass facing is carried up all parapet walls, which are only 4 in. thick in reinforced concrete. In place of the usual coping is a front curb of "Birmabright" metal, lapping a lead cover flashing at the back, as indicated in Fig. 3. Along the brim of the building is a "cornice" of runway track, from which cradles may be slung to facilitate the cleaning of wall and window glass. The focus of interest in the main elevation is in the canopy over the principal entrance, which, with the curved window frames flanking the doors, is formed in stainless steel. The soffit of the canopy contains lighting panels of sand-blasted glass, while above, two floral baskets of "Neon" lighting tubes add further brilliance, both integral and reflected, to the building.

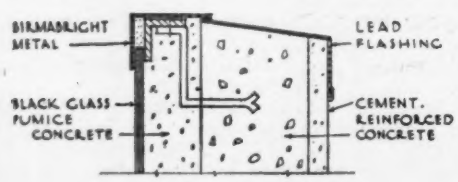


FIG. 3.

Internally, the whole of the walls and partitions are finished with finely trowelled Portland cement, a departure from the more usual finish in a Keene's type of cement. The ceilings and reinforced concrete work generally were cast in wrought shuttering and have received no further treatment beyond painting. The difficulty of persuading paint to adhere to new cement without peeling or changing colour appears to have been solved. Specially made paint was applied in a priming coat, an undercoat, a second undercoat which was stippled, and a final finishing coat of gloss paint. The excellent surface quality of the finished paintwork is due to the breaking up of the final gloss coat by the stippled undercoat.

The main staircase is entirely of reinforced concrete, including the thin encircling wall and the extended string. Walls, treads, risers and strings are all covered with fine "Biancola" terrazzo, divided by ebonite strips of T-shaped section. Nosings are formed in non-slip tiles. A sturdy bright metal handrail rests on short streamlined uprights painted green. The staircase soffits and landing ceilings are painted a dull orange-vermilion. From the landings, ebonised teak doors, with chromium-plated fittings and glazing cames, lead into the offices. Completely utilitarian folding steel gate-doors to the lifts give a pleasingly serrated pattern in cellulosed silver. The lift cages themselves are guarded by their own collapsible gates, gilded, and repeat in their plywood linings the silver cellulose of the landing doors. The private offices are divided by metal screens, sprayed a dull gold. In the general offices the main gangway between furniture are laid in rubber above the wood flooring, the edges of the rubber being protected by small hardwood coves. The furniture in the general offices is not, I hope, more than temporary—it is entirely out of character with the building.

The heating of the building is entirely through ceiling panels worked from the boiler-house in the old building. Ventilation plants are on the roof, from which machine room, publishing department and linotype room receive clean washed air from ducts running down on either side of the main staircase oval. A second system of extract ducts, similarly accommodated, assures ready circulation. The air is warmed in cold weather to maintain a proper working temperature for the machines throughout the year. In connection with the machine hall, a departure from normal practice is to be observed in the substructure to the presses. The reel holders are carried on a specially cast steel framework, which also supports the intermediate chequer-plate floor, instead of the customary independent grid of steel stanchion and joist.

In conclusion, the architects are to be congratulated on creating a work of architecture which expresses the newspaper building. The incident of the use of glass for the facing (instead of for only about one-half of the facing in the normal manner) may occasion some shaking of heads, but that, I think, is merely because one is inclined to associate glass with fragility and brittleness, forgetting that a modern glass, such as that used, is extremely tough and is breakable only into very small pieces. Bricks are apt to be thrown in Fleet-street; should one, perchance, strike this new building, it will not retaliate with a cutting reply, but rather reproach the unmannered assailant with a gentle shower of vitreous peas.

The general contractors were Messrs. Trollope and Colls, Ltd., and following is a list of the sub-contractors:—Moreland, Hayne and Co., Ltd., constructional steelwork; The North Acton Conveyor and Elevator Co., reel conveyors; the Express Lift Co., Ltd., lifts; the Automatic Sprinkler Co., Ltd., sprinkler installation; Richard Crittall and Co., Ltd., panel heating, domestic hot water supply, ventilating and boiler plant; W. and T. Avery, Ltd., motor lorry weighbridge; S. Haskins Bros., steel roller shutters; C. A. and A. W. Haward, metal framework to reel conveyors; Crittall Manufacturing Co., Ltd., metal windows; John Tann, Ltd., fire-resisting strong room; Wotton and Son, lantern lights and skylights; Fenning and Co., black ebony granite plinth; James Clark and Son, Ltd., black glass facings; Art Pavements and Decorations, Ltd., terrazzo work, marble dado, etc.; W. B. Simpson and Sons, Ltd., wall tiling, terrazzo paving to lavatories; the Zeta Wood Flooring Co., Ltd., pitch pine block flooring; the Birmingham Guild, Ltd., Birmabright strips for securing the black glass; the Birmingham Guild, Ltd., metal canopies, doors, lift cages, vent grille, wall fittings, etc.; P. C. Henderson, Ltd., track brackets and trolley hangers; H. Pontifex and Sons, Ltd., lavatory fittings; Roneo, Ltd., metal partitions; Keystona Paint Sales Co., paints and distemper; Colemanoid, concrete waterproofing; the Ham River Grit Co., Ltd., ballast, etc.; the Cement Marketing Co., cement; E. Heffer and Co., electric light fittings; the India Rubber Gutta Percha Co., rubber flooring; Drake and Gorham, Ltd., electrical distribution system. Entrance Hall: Art Marbles, Stone and Mosaic Co., Ltd., marble and granite work; W. Aumonier and Sons, carved panels; G. Jackson and Sons, Ltd., plasterwork; Trollope and Sons, paintwork; Betty Joel, Ltd., furniture, panelling, etc.; Morris-Singer Co., handrails; Cox and Co., metal and glass work and steel furniture; Drake and Gorham, Ltd., electric wiring; Bagues, Ltd., lighting fittings; Nash and Hull, Ltd., neon lighting; K.F.M. Engineering Co., Ltd., illuminated signs; Macinlop, Ltd., rubber floor; Moreland, Hayne and Co., Ltd., steelwork to canopy; Guthrie and Wells, glass panels to canopy; George Parnall and Co., Ltd., lettering; Association for the Blind, mats.

Messrs. Ellis and Clarke, FF.R.I.B.A., are the architects, the main public hall having been designed by Messrs. Robert Atkinson.

ILLUSTRATIONS

PLATES.

Church of St. Mary the Virgin, Eaton Socon.

A special description of this church, which has just been rebuilt after a fire, is given on page 86. Messrs. Richardson and Gill, FF.R.I.B.A., are the architects.

English Cottage Competition

We illustrate this week the sixteen premiated designs in this competition, which was organised by the Incorporated Association of Architects and Surveyors. The full award is given on page 84.

St. Margaret's House, Wells-street, W.

The London Architecture Medal for 1931 has been awarded to St. Margaret's House, Wells-street, W., for which Messrs. Richardson and Gill, FF.R.I.B.A., are the architects. The building consists of basement and sub-basement, shops on the ground floor, showrooms and offices above, and a large studio in the roof. The piers of the ground story are faced with marble, 2 in. white bricks being used for the general elevation.

Warriors' Chapel, Westminster Abbey.

In connection with this work, which we illustrated in our last issue, we are asked to state that Mr. W. F. Knight, of Wellingborough, was the maker of all the metalwork.

Awarded the R.I.B.A. London Architecture Medal, 1931.

St. Margaret's House, 19-23, Wells Street, W.

MESSRS. RICHARDSON AND GILL, FF.R.I.B.A., Architects.

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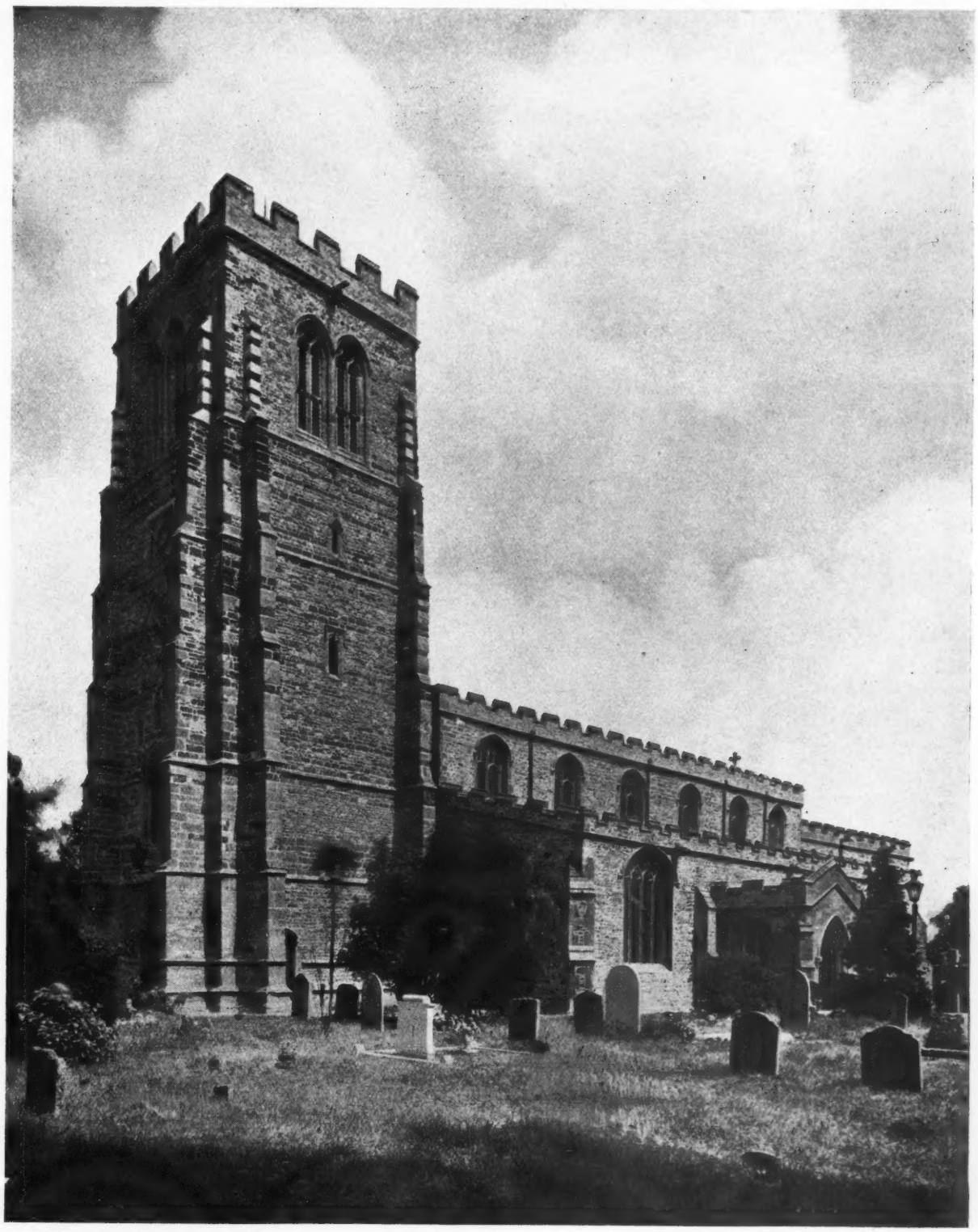
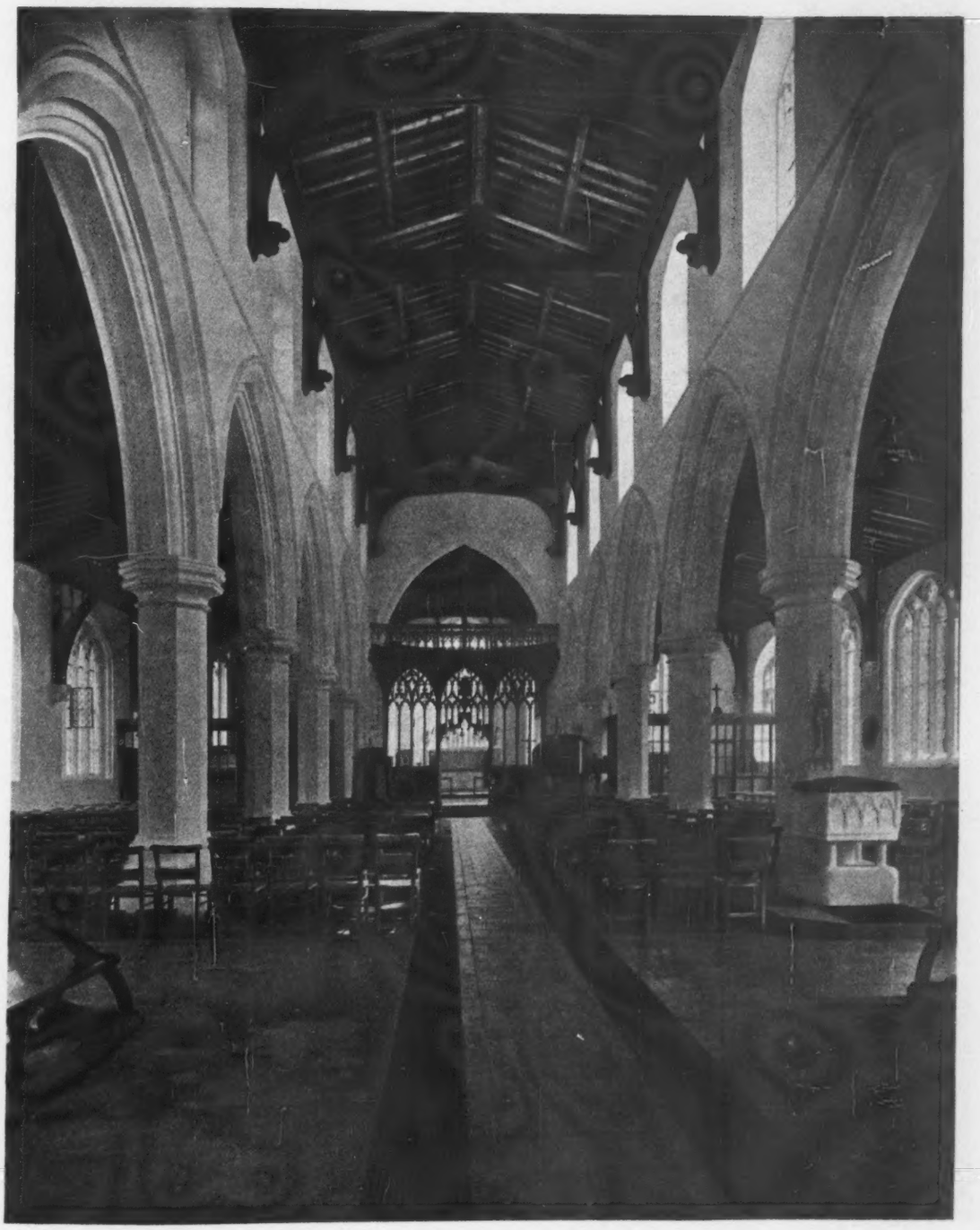


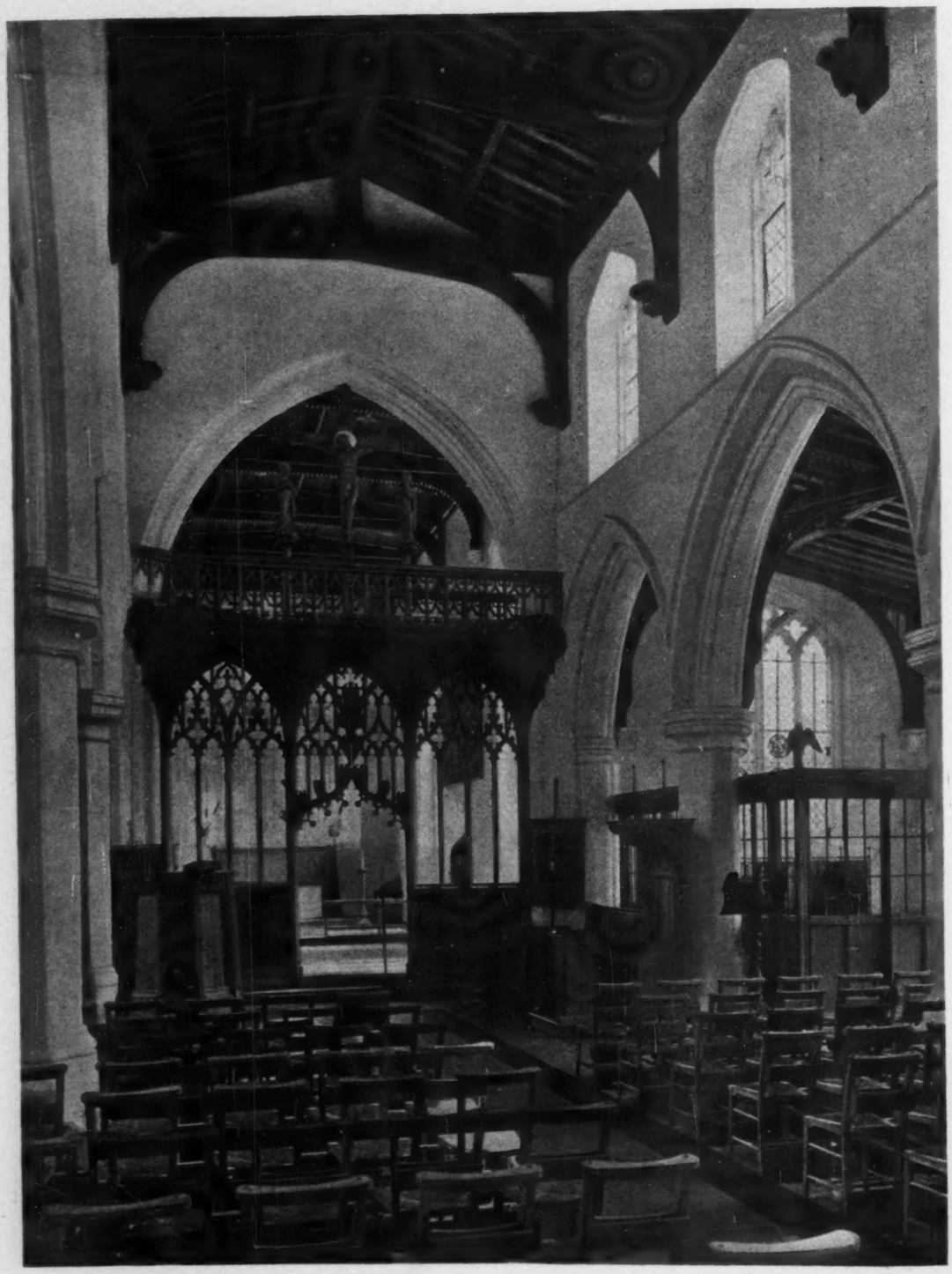
Church of St. Mary the Virgin, Eaton Socon, Hunts.: View from South-West.

MESSRS. RICHARDSON AND GILL, FF.R.I.B.A., Architects.



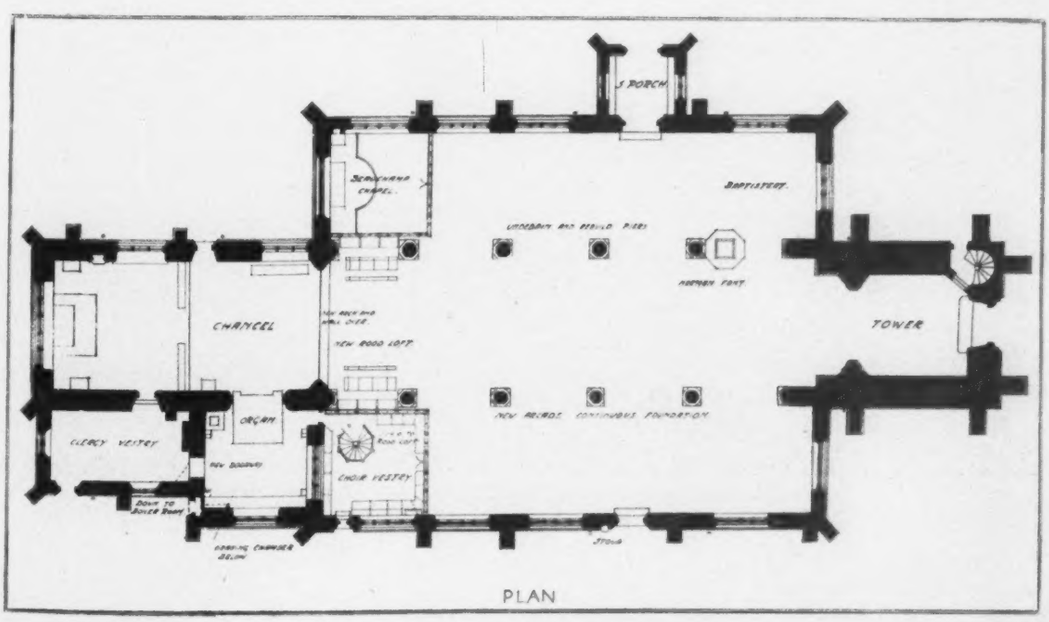
Church of St. Mary the Virgin, Eaton Socon, Hunts.: View in Nave, looking East.

MESSRS. RICHARDSON AND GILL, FF.R.I.B.A., Architects.



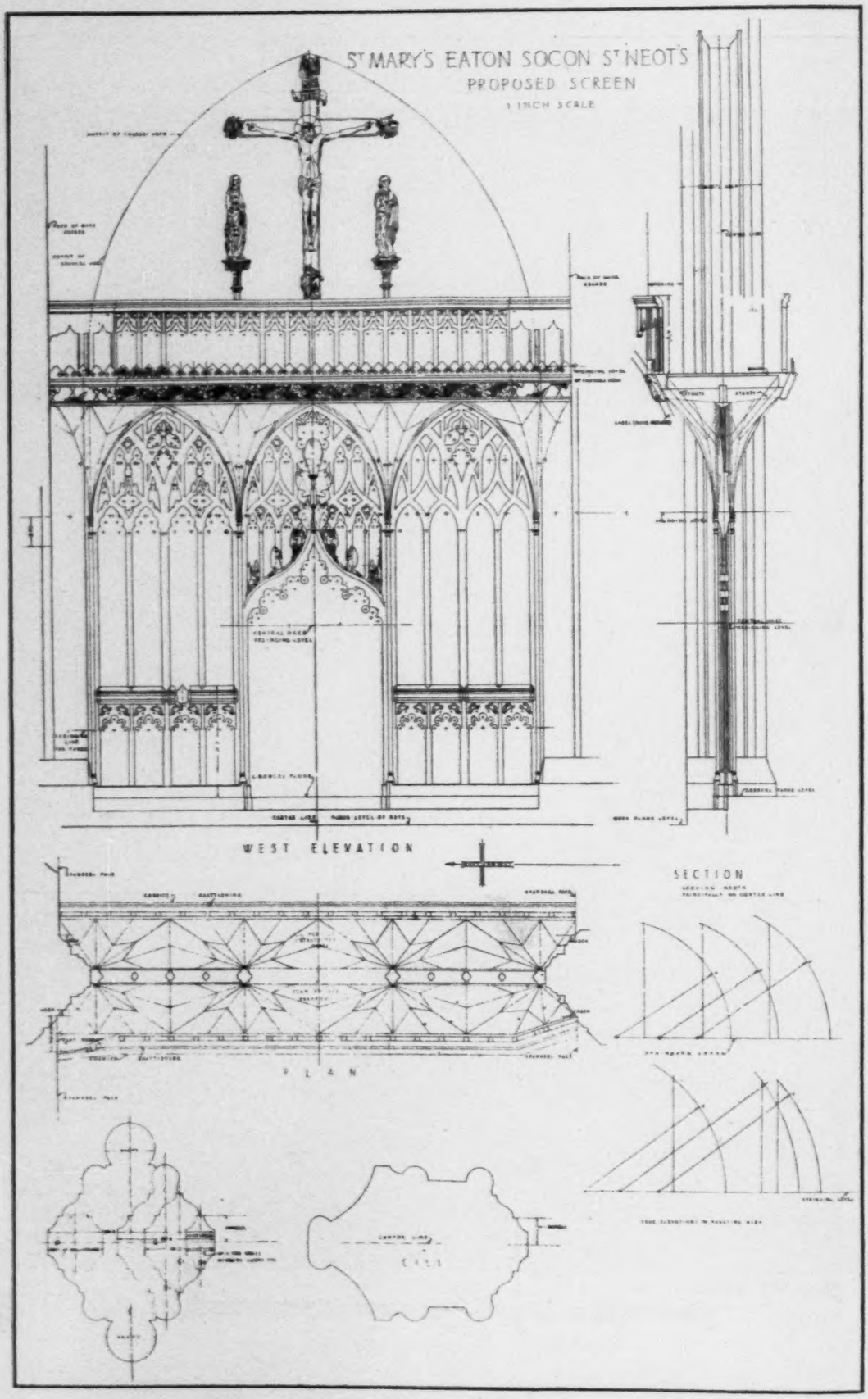
Church of St. Mary the Virgin, Eaton Socon, Hunts.: View of Screen, looking towards Chancel.

MESSRS. RICHARDSON AND GILL, FF.R.I.B.A., Architects.



Church of St. Mary the Virgin, Eaton Socon, Hunts.

MESSRS. RICHARDSON AND GILL, FF.R.I.B.A., Architects.

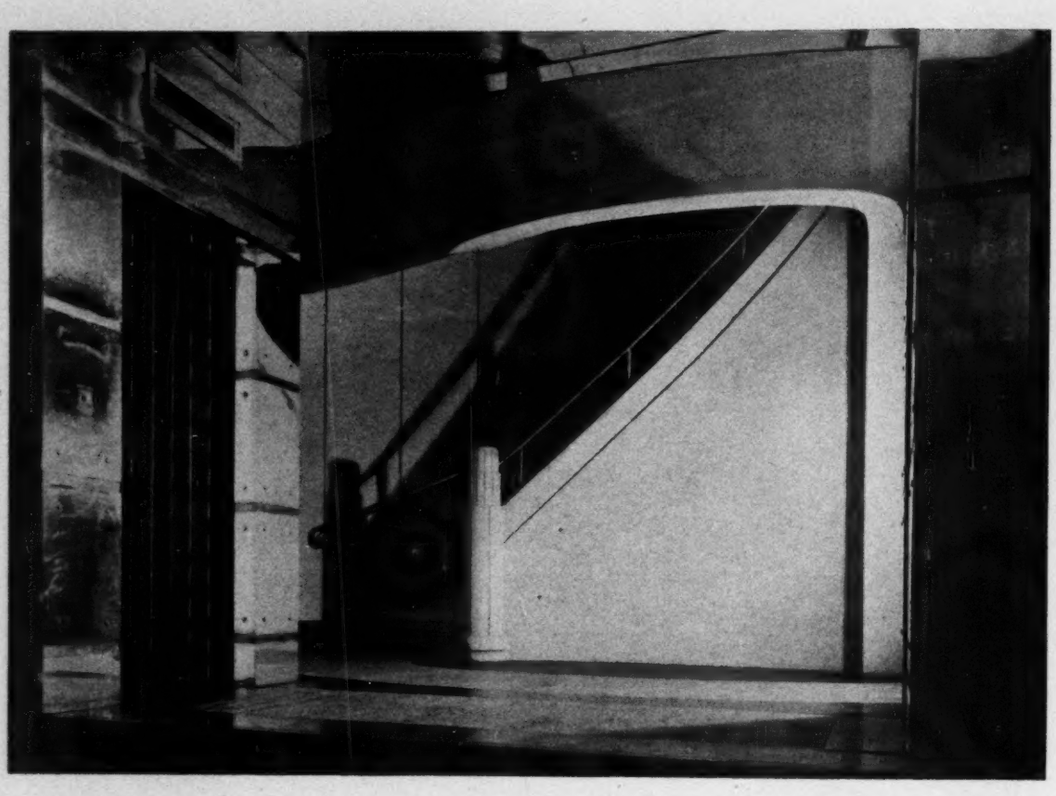


Church of St. Mary the Virgin, Eaton Socon, Hunts: The Screen.

Messrs. Richardson and Gill, FF.R.I.B.A., Architects.

The "Daily Express" Building, Fleet Street, E.C.

MESSRS. HERBERT O. ELLIS AND CLARKE, FF.R.I.B.A., Architects.

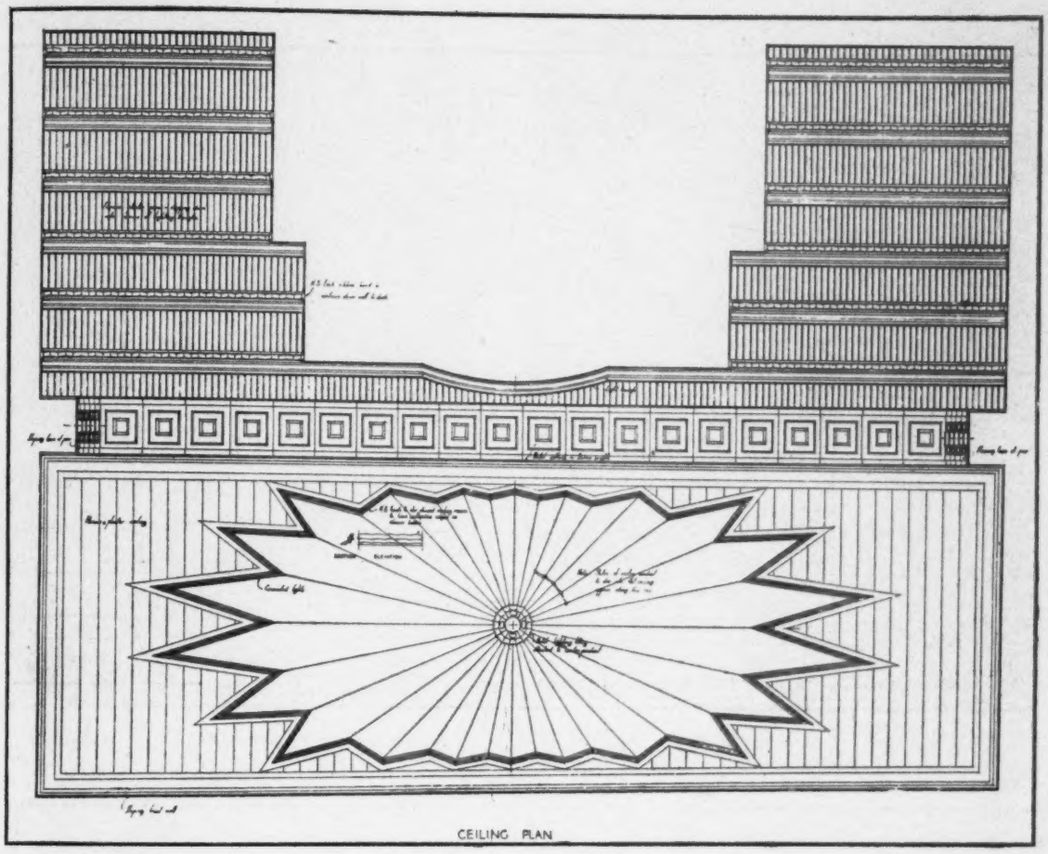


STAIRCASE.

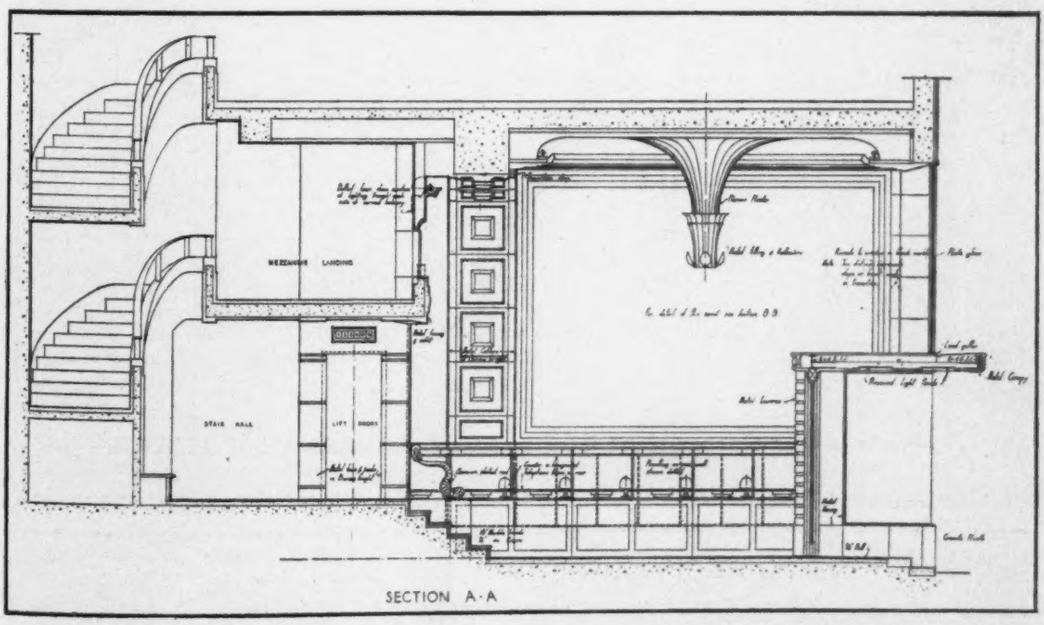
AN INTERIOR.

The "Daily Express" Building, Fleet Street, E.C.

MESSRS. HERBERT O. ELLIS AND CLARKE, FF.R.I.B.A., Architects.



CEILING PLAN

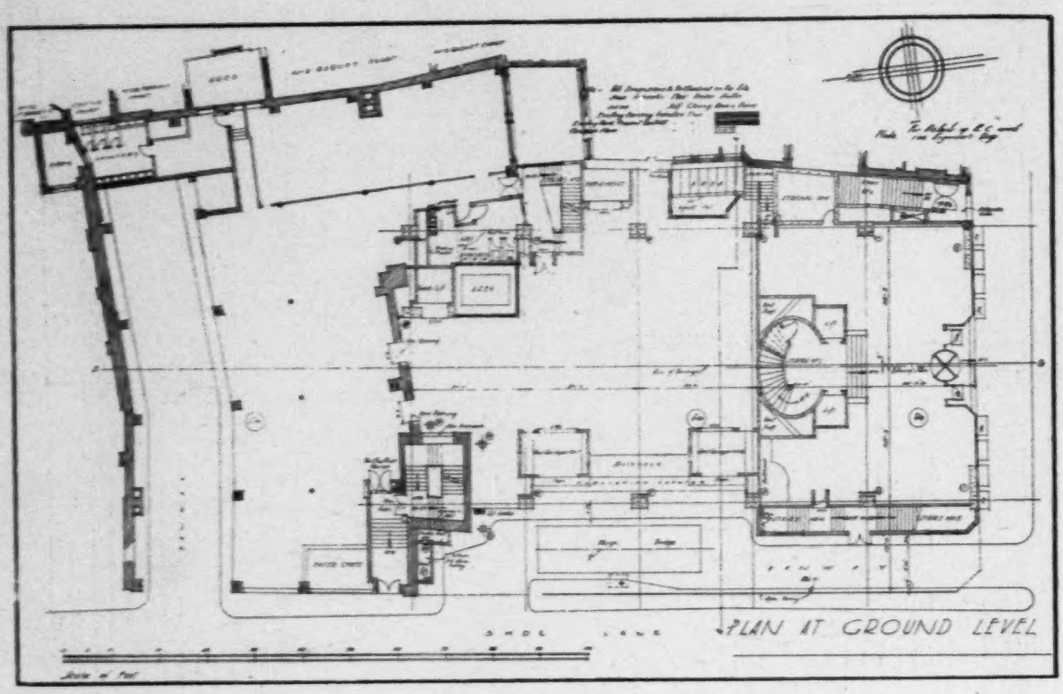


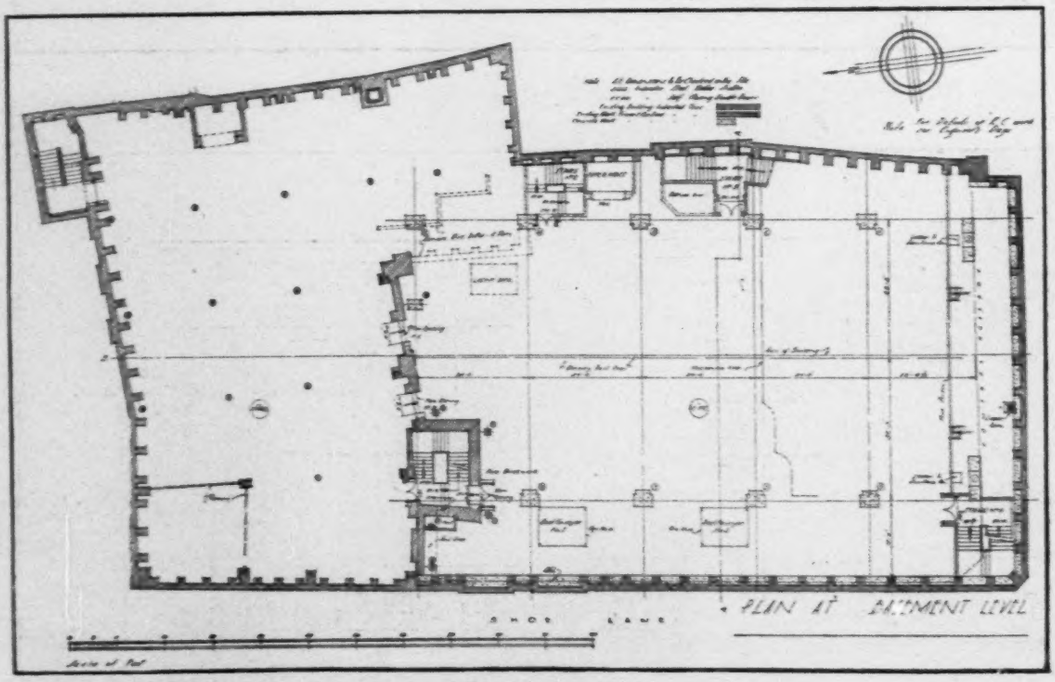
SECTION A-A

The "Daily Express" Building, Fleet Street, E.C.: Main Public Hall.

Designed by Messrs. Robert Atkinson.

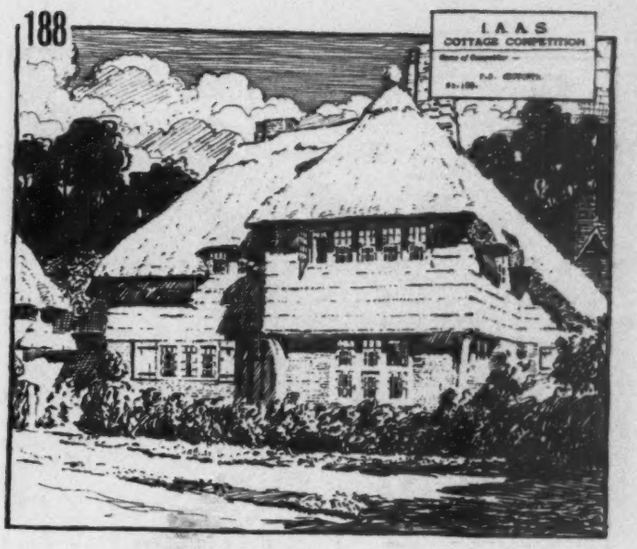
Messrs. Herbert O. Ellis and Clarke, FF.R.I.B.A., Architects.

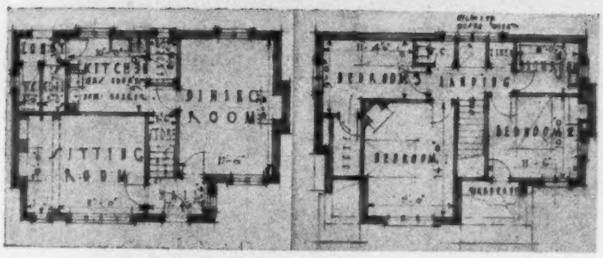




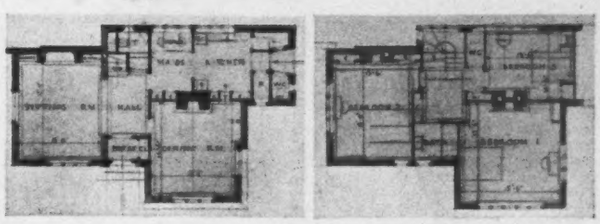
The "Daily Express" Building, Fleet Street, E.C.

MESSRS. HERBERT O. ELLIS AND CLARKE, FF.R.I.B.A., Architects.

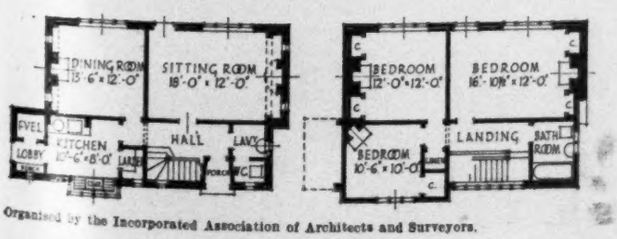




By Mr. H. T. Townsend.



By Mr. P. D. Hepworth.



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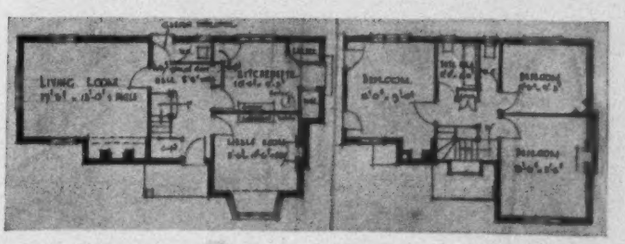
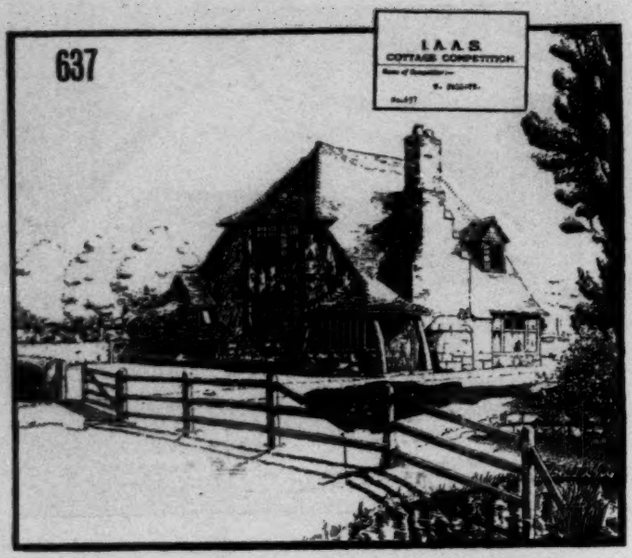
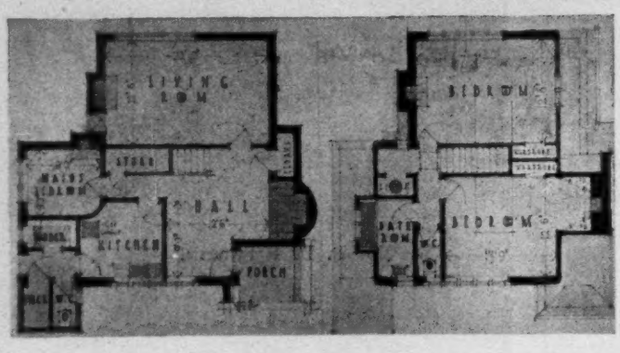
By Mr. E. J. Wood.



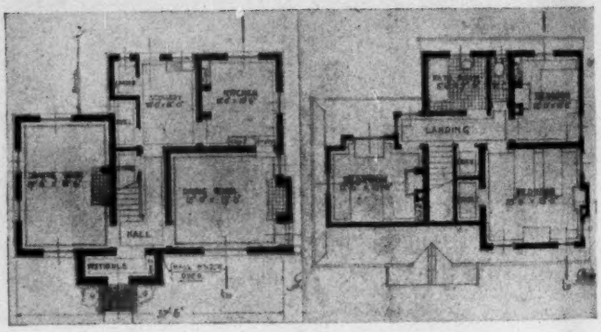
By Mr. F. W. Dark.

English Cottage Competition: Premiated Designs.

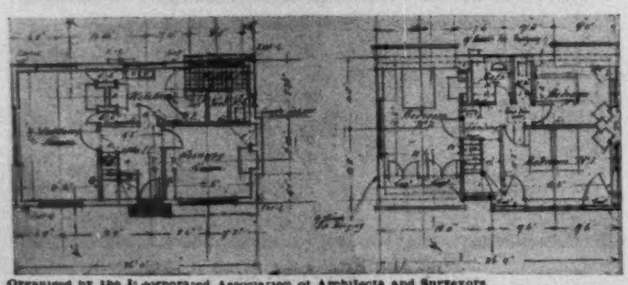




By Mr. W. Falgate.



By Mr. R. D. Robson.



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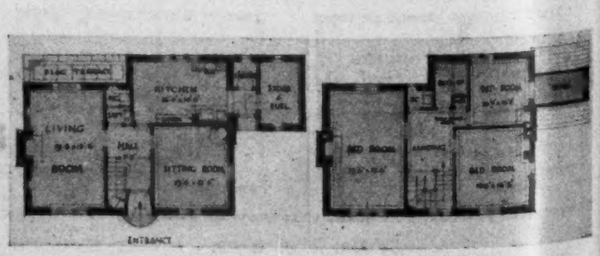
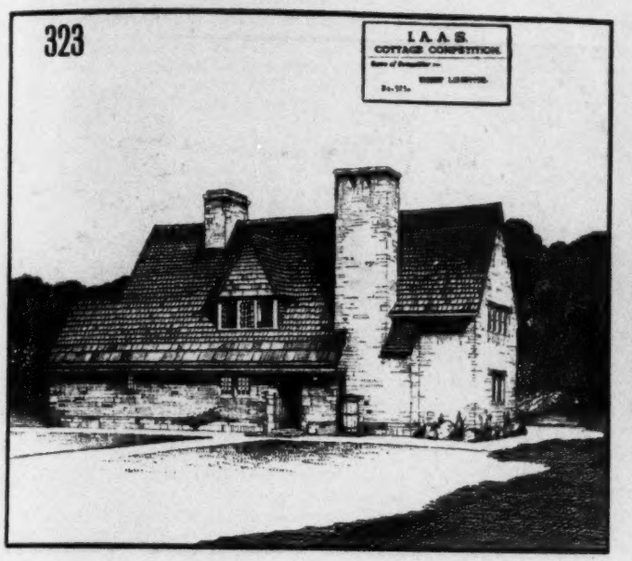
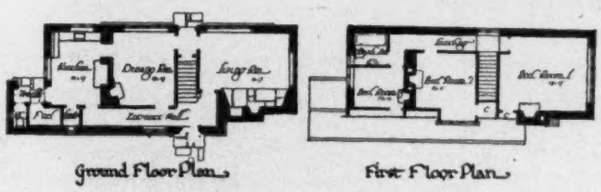
By Messrs. Rose and Abram.



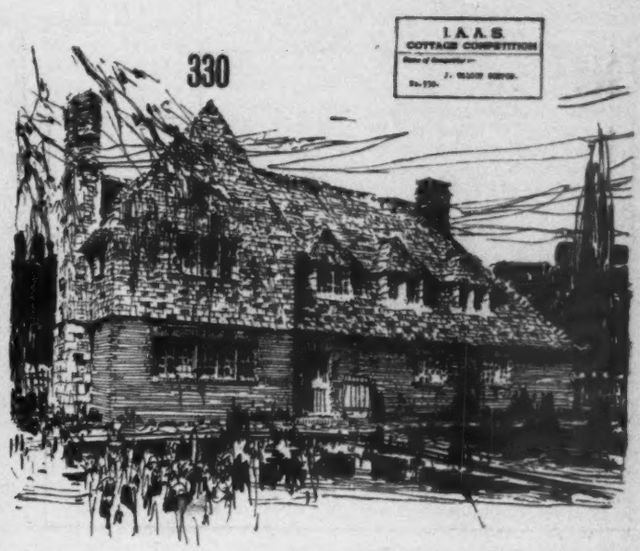
By Mr. William Sinning.

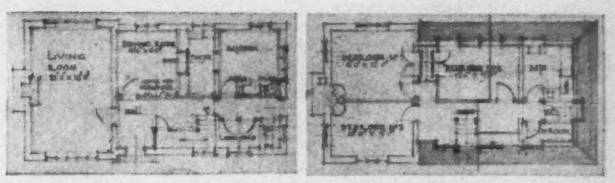
English Cottage Competition: Premiated Designs.



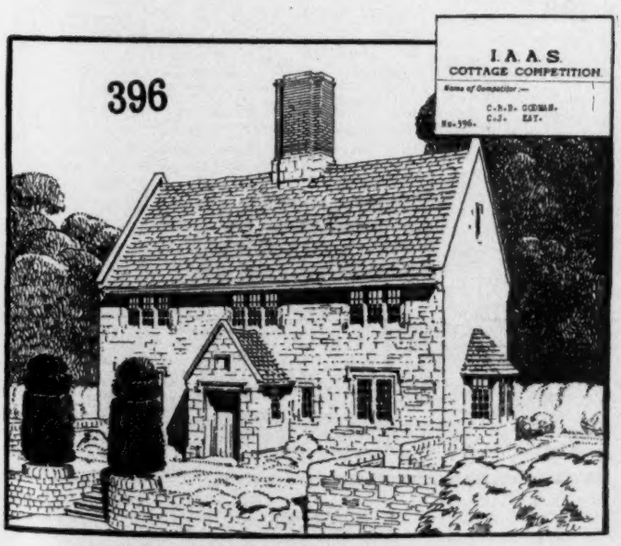


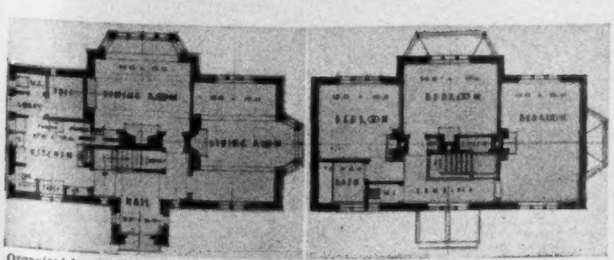
By Mr. Hubert Lidbetter.





By Messrs. Walcot, Burton and Walcot.





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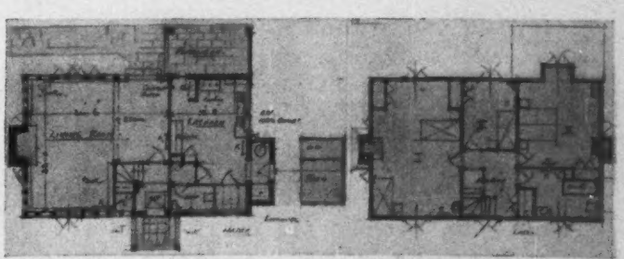
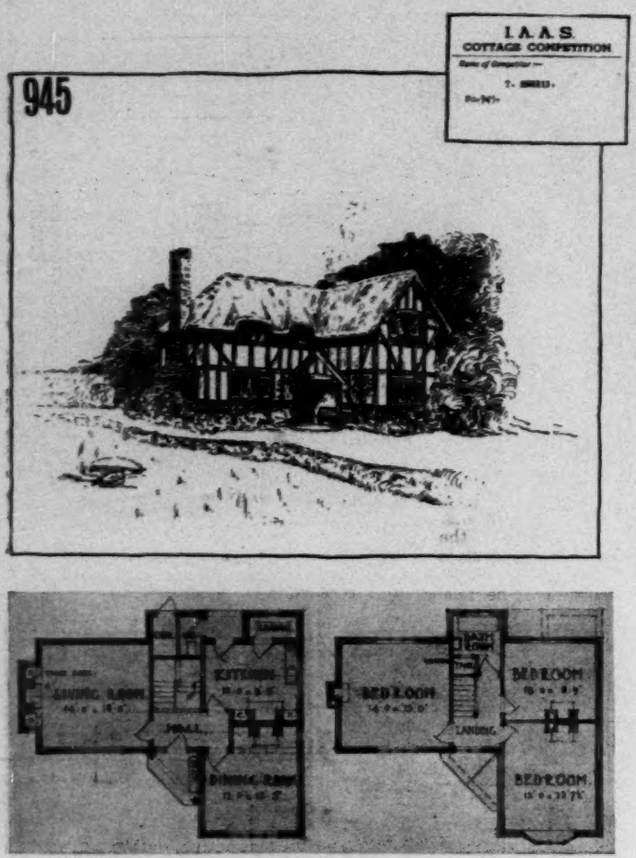
By Messrs. Godman and Kay.

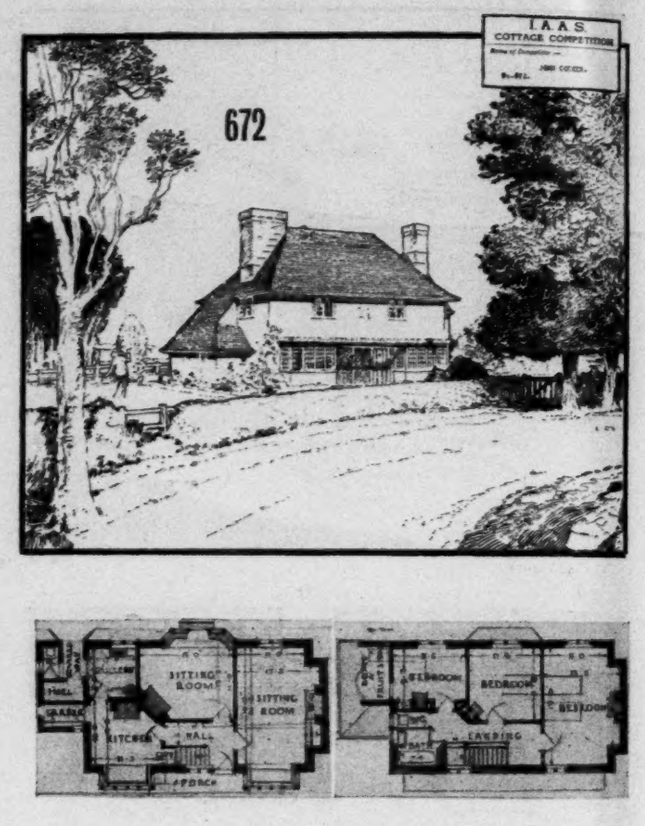


By Mr. F. Worthington Simon.

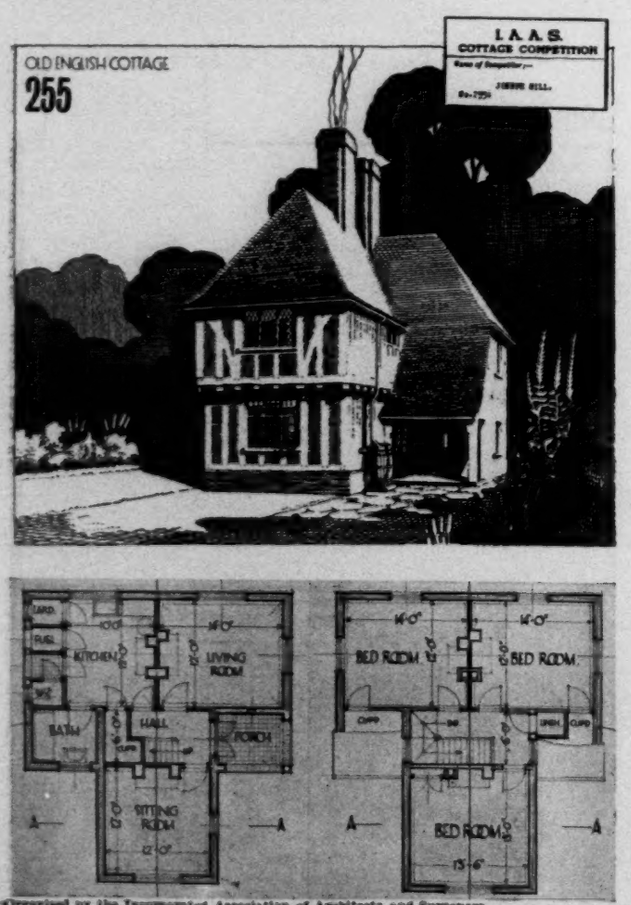
English Cottage Competition: Premiated Designs.



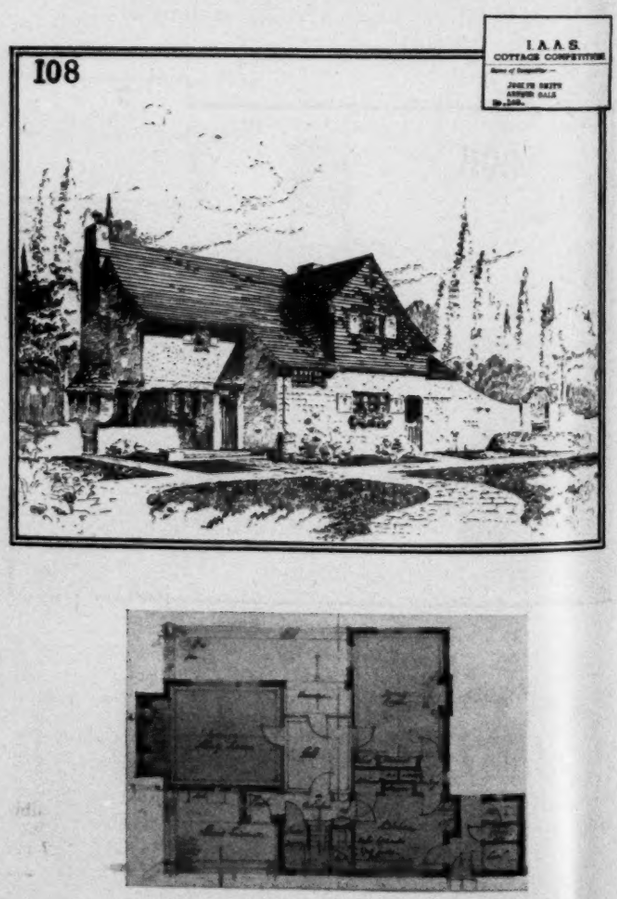
By Mr. Tom Morris.



By Mr. John Cocker.



By Mr. Joseph Hill.



By Messrs. Smith and Gale.

Organised by the Incorporated Association of Architects and Surveyors.

English Cottage Competition: Premiated Designs.

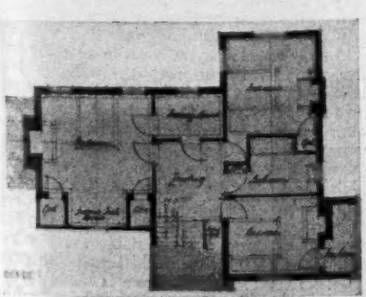
THE ARCHITECTURAL ASSOCIATION

THE ANNUAL PRIZE-GIVING.

THE prize-giving for the year's work, 1931-32, of the Architectural Association was held at 34-36, Bedford-square, W.C., on July 8, Mr. A. B. Knapp-Fisher (president) occupying the chair.

The President, in introducing Lord and Lady Gorell, said that, in spite of the feeling of uncertainty in the air, the A.A. was as full of life and vigour as ever. They had had a year of phenomenal successes, the fruits of the school's teaching and proof, he thought, of the general all-round soundness of its system of education. In spite of those signs of prosperity and vigour, there was no overlooking the fact that the profession of architecture was experiencing a severe period of enforced inactivity. It was extremely difficult to get engagements in offices or to make a start in practice. He sympathised with students who, having worked and trained in the greatest of the creative arts, found that there was nothing for them to create, or that the majority of the work there was was in the hands of those whose only qualification was business acumen. It was no good mincing matters: architecture in its best and truest sense was a profession more for the few than for the many. He was not a pessimist, however, and if a man or a woman was endowed with real aptitude and gifts and was really keen and could persevere, then he would say: "Do not take too much thought for the morrow, but drive on confident and with faith in the future." If it was not this year or even next, there was certain to be a great deal of building during the next ten years. If we had no faith in the future, we had no faith in ourselves, and we did not deserve to get on. But if the student was not fitted for the most exacting and complex but fascinating work of architecture, then let him pause and think.

The President then referred briefly to the successes of A.A. members during the year, which included the competitions for the R.I.B.A. New Premises, the Walthamstow Town Hall and the Norwich Municipal Buildings. The R.I.B.A Essay prize, the Neale Bursary, and the Tite prize had also been gained by members of the staff or students. More recently, the R.I.B.A. London Street Architecture Medal had been gained by Messrs. Richardson and Gill, members of the Association. The subject of competitions led him to refer to a proposed series of competitions to be run by the A.A. for designs for standardised articles used in building, such as door furniture, electric fittings, etc. He much hoped that when plans were ripe Lord Gorell would lend his experienced aid. After reference to the Building Centre and the A.A. popular lectures, the President touched upon the Architects' Registration Act, a topic which concerned the general public because the responsibility which attached to architecture had in part to be borne by the public. Very shortly it would be an infringement of the law for an unauthorised person to carry on practice as a registered architect. Certain schools would be given exemption from the examinations, which would qualify for entry to the statutory register, but, whatever the standard decided upon for qualification, he believed it would be a great mistake to lower the diploma standard of the A.A. School. To take the shortest cut into the profession in the eyes of the law might be a temptation to some, but it was his feeling that the responsible and competent architect of the future would want something more than to be on a list, would want first the standard that the diploma of a school such as the A.A. could give him, and, second, the position that an institute such as the R.I.B.A. alone could confer. The President then concluded by referring to the genuine pleasure it was to have Sir Raymond Unwin present, "whose work as President is adding more and more to the prestige and position of the R.I.B.A."; to the hard work, keenness and general ability of the A.A. teaching staff, and to the kindness of Lord and Lady Gorell in attending that day.



ENGLISH COTTAGE COMPETITION: First-floor Plan of Design by Messrs. Smith and Gale.

After Lady Gorell had presented the awards, Lord Gorell spoke to the students. He had seen it said, he remarked, that the battle of the styles was over and that style no longer mattered. Yet style—as the expression of a man's individuality—was, he felt, important in everything. On one side of its work, at least, the School could congratulate itself, for it seemed that the A.A. and not Russia had invented "the five-year plan." That brought him to the President's remark that it was a time of difficulty. Yet there was no need for pessimism, for never was there a time of greater opportunities for the architectural profession. Changes were taking place in London, and architects, even if handicapped by the present financial stringency, were going to have tremendous opportunities. Architecture might be in a greater state of fluidity than ever before, yet it only really began to live when people began to question the principles on which it stood. To-day, there had been placed in the architect's hands materials and methods which our ancestors never had. Such a profusion might be embarrassing, yet what chances for design it afforded.

A vote of thanks to Lord Gorell was proposed by Sir Raymond Unwin, who said that architecture had to provide accommodation for all the activities of the public. At present we had our difficulties, but as regarded financial affairs it could be said that there were other countries in a worse case. Yet architecture had its particular difficulties. Though the battle of the styles was over, there were yet many things which the architect could not see plainly. In the A.A., under the tolerant and wise direction of the staff, such problems were being met, and his advice to students was: "Be true to your purpose, your materials and your individuality, but do not think that there is nothing permanent." Sir Raymond concluded by stating that it had been decided to invite the President of the A.A. each year to become a member of the R.I.B.A. Executive Council, so that the A.A. should keep in the closest touch with the Institute.

Mr. Howard Robertson (principal), in seconding the vote, referred to the fact that the ladies had had signal success during the year, especially Miss Mary Crowley, who had won two prizes in the final year. He would especially remark upon the award to Miss Crowley of the medal offered by the Société des Architects Diplomés par le Gouvernement, Paris, the winning of which placed her on a level with the very highest students of France. As to Sir Raymond Unwin, he would like to say that the A.A., both staff and students, were delighted at the honour of knighthood conferred on him.

The assembly then dispersed for tea and to inspect the exhibition of the students' drawings, which remains open until July 29, from 10 a.m. until 7 p.m.

A pleasant time may be spent in the examination of the large volume of work now on view at the Architectural Association, which represents what the past session has produced. The variety of subjects which have engaged the thoughts of the students show what a wide field there is to be covered. The thesis which was left to the choice of students of the last year's work was made the occasion of an educational centre by Miss M. B. Crowley, and this she has dealt with in a very able manner and produced a large set of interesting drawings. She has well-earned her reward. In the same year a clever design for a Town Church, by Mr. S. C. G. Lambert, will be noted, which shows quite a fresh touch of Renaissance detail. In the fourth-year work, a design for a Terminal Feature and a Park Entrance by Mr. E. T. Dowling, has a telling effect of some dignity and distinction. In the third year, Mr. H. F. Smith has an unusual and agreeable effect of a pleasing building on a picturesque site. In the second-year work a customs house for a small port appears to have been an attractive subject, and Mr. N. C. Westwood has done well in his design. Several of the drawings in the different years show very creditable work, and the tendency is to avoid mere eccentricity and exaggerated entrances. We still feel that something a little more definitely founded on tradition would yield better results; a repetition of exaggerated horizontality in windows is a rather worn-out method of design. That there is a living faith in the beauty of Gothic detail our students would realise from a visit to the beautiful Warriors Chapel in Westminster Abbey. In the meantime, the Young Women's Christian Association building, by Sir Edwin Lutyens, is significant evidence that the well-worn tradition of English mode produces satisfying and beautiful building when it is put together with admirable proportion and distinction. A small store is one of the subjects shown at the A.A., and it came near being a success, and might have been completely so if right emphasis and good proportion had been more definitely the aim of the student.

The Prize List.

Following is the prize list, 1931-32:—

Public School Entrance Scholarship. (Value £75 12s.): D. W. Pye (Winchester College). Honourable mention: R. K. Rutherford (Shrewsbury School).

Open Entrance Scholarship. (Value £75 12s.): D. S. Pearce (Eltham College). Honourable Mention: W. E. F. Johns (Eltham College).

Renewal of Annual Scholarships: J. G. Charter, R. A. Kirby, R. L. Townsend, E. V. Tibbits, R. R. Wilkins, R. Wilson.

A.A. Measured Drawings Prize. (Books. Value £20): Divided, R. A. Kirby, N. C. Westwood.

A.A. Essay Prize. (Books. Value £10 10s.): E. W. Berridge.

"Alec Stanhope Forbes" Prize. (For the best colour work during the session. Books. Value £5): R. L. Banks.

Medal, presented annually by the Société des Architectes Diplômés par le Gouvernement, Paris, to the best Diploma student of the session: Miss M. B. Crowley.

Royal West of England Academy School of Architecture. (Affiliated with the Architectural Association). (Prize in Design. Books. Value £5 5s.): J. W. Greenwood.

First Year Course. "Howard Colls" Travelling Studentship. (Value £15 15s.): M. Pattrick. Second Prize. (Books. Value £5 5s.): R. R. Wilkins. Honourable Mentions: R. A. B. Hitch, B. H. Peake. Principal's Special Prize: M. Pearman.

Second Year Course. A.A. Travelling Studentship. (Value £26 5s.): N. C. Westwood. Second Prize. (Books. Value £10 10s.): R. S. Tubbs. Honourable Mentions: H. T. Cadbury Brown, P. A. Warre Cornish, F. C. Keel, V. H. Seymer.

Third Year Course. Holloway Scholarship, tenable for two years. (Value £250): H. Tayler, A.A. Travelling Studentship. (Value £31 10s.): Miss M. J. Blanco White. Second Prize. (Books. Value £10 10s.): C. J. E. Marshall. Honourable Mentions: Miss S. M. Cooper, Miss C. L. Gray, R. H. Macartney.

Fourth Year Course. Year Prize. (Books. Value £10 10s.): E. T. Dowling. Honourable Mentions: W. W. Fisk, O. Pryce-Lewis, A. W. Franklin-Sterling.

R.I.B.A. "Henry Jarvis" Scholarship for Construction. (Value £50): W. W. Fisk. Honourable Mentions: E. T. Dowling, O. Pryce-Lewis.

Fifth Year Course. A.A. Travelling Studentship. (Value £50): Miss M. B. Crowley. "Henry Florence" Travelling Studentship. (Value £50): E. Mayorcas. Third Prize. (Books. Value £10 10s.): L. A. Drake. Honourable Mentions: Miss D. Bickerton, E. C. Kent, B. P. Westwood.

THE ROYAL SANITARY INSTITUTE CONGRESS AT BRIGHTON.

The 43rd Congress of this Institute was commenced at Brighton on July 9, and will continue until Saturday, July 16. It is understood that upwards of a thousand delegates are visiting the Congress, for which the most interesting papers and the extensive arrangements for the comfort and entertainment of the delegates must be held responsible.

The inaugural address of the President of the Congress, the Rt. Hon. Lord Leconfield, was delivered on Monday morning. Points dealt with in the course of the speech were that there had been a tendency on the part of local authorities to judge their progress in public services by the extent of the financial expenditure involved, whereas authorities should aim at securing the best possible results from the expenditure which the country could afford. He wished to impress upon local authorities the vital need at the present time for scrutinising every detail of public expenditure, so as to secure that such expenditure was allocated according to the relative importance of the various services. Building development, more especially in the rural districts, should be controlled, and, as far as possible, limited to those areas where the provision of the public services could be afforded on economic lines.

"HYGIENE IN INDUSTRY."

The conference on this subject was held on Tuesday. After the presidential address by Mr. Robert S. Hudson, M.P., a paper on "Illumination in Industry" was read by Mr. W. J. Jones, M.Sc. While in many progressive factories the subject of lighting had been given its due place, said the speaker, there was still a lamentable tendency on the part of most industrial executives to consider lighting as an expense which should be borne grudgingly. On investigation that view could hardly be substantiated, since lighting had an important bearing on both the well-being of the worker and the overall efficiency of the plant. There appeared to be little reason nowadays for inadequacy of illumination, bearing in mind the fact that the cost of producing light had been substantially reduced during recent years. At the present time it was possible to get an average of 220 candle hours per penny in the place of only 83 candle hours per penny in 1922. In connection with the comparative cheapness of modern industrial lighting, it was interesting to note that the average cost of providing good illumination worked out at about one farthing per hour per worker.

To-day there was a general tendency to avoid the drop pendant system of lighting, which was inevitable when lamps of only limited power were available, and to instal general overhead lighting, supplemented in certain special cases with well-designed local lighting. Due to intensive commercial research, the engineer could to-day produce with accuracy almost any desired lighting conditions, and, were this fact taken advantage of by industrial executives with a view to providing good lighting in all industries, there was no doubt that the ultimate effect of such a step would be beneficial to everybody concerned.

The recommended illumination values for industrial processes were :—

	Foot candles recommended.
Offices—general	12
Drawing offices	25-50
Foundries—rough moulding	8
Assembly shops—rough ...	8
Machine shops — medium work	10
Sewing—light goods ...	12
Sewing—dark goods ...	25-50
Laundries and dry cleaning	12
Warehouses	3

"ENGINEERS AND SURVEYORS."

This Conference was held on Thursday, when the Presidential Address was read by Mr. Herbert H. Humphries, C.B.E., M.Inst.C.E. This was followed by a paper on "Sea Outfalls," by Mr. George W. Warr, F.S.I. This dealt more particularly with the sanitary and public health point of view of the subject, and was followed by a paper on "Some Recent Municipal Activities at Brighton," by the Brighton Borough Engineer, Mr. David Edwards, M.Inst.C.E. After dealing with the sewerage problem in the borough, the sea defences were discussed. The problem of providing adequate sea defences to an additional length of 3¼ miles of sea front, which the borough acquired in 1928, called for early solution, said the speaker. A comprehensive scheme of protection was prepared consisting of heavy sea walls constructed in mass concrete faced with precast flint-faced concrete blocks, together with the provision of regular groyning also in mass concrete. The top of the sea wall was 10 ft. above high-water mark of spring tides, and between the face of the wall and the foot of the cliffs a promenade was provided for the use of pedestrians.

In the matter of housing great progress had been made, and during the past few years upwards of 2,000 houses had been completed. Those provided accommodation, with an internal floor measurement varying from 950 sq. ft. to 750 sq. ft., of a proportion of four, three and two bedrooms, living room, scullery and usual offices. The cost had varied considerably during the past few years, and the rents as a consequence varied from 14s. 6d. to 12s. 6d. per week inclusive. Recently, however, the Council decided to provide a smaller type of house with a view to reducing the rents still further, and a contract (£88,320) had recently been accepted for the erection of 300 additional houses on the Whitehawk Estate. The floor area of those houses was, for two bedrooms 620 super ft., and three bedrooms 700 super ft., and the price per house averaged £294 10s. At that price it was anticipated that the rent would be 9s. per week, inclusive of rates, land, roads, drainage, etc. The houses were built at a density of 14.5 to the acre, with an average frontage of 20 ft.

On the question of town planning, the powers suggested by the Town and Country Planning Bill now under consideration might, or might not, said the speaker, be sufficient to secure all that was required to prevent the few injuring the masses. Brighton had obtained powers by an Act of Parliament, the "Brighton Corporation Act, 1931," for controlling elevations and materials of construction of new buildings and substantial alteration of any external wall or of the roof of an existing building. That Act provided that where the Corporation considered that the building or materials were objectionable on any of the following grounds :—

(i) would, having regard to the general character of the existing buildings in the street or of the buildings proposed to be erected in the street, seriously disfigure or deteriorate the character of the street, or

(ii) would hinder the improvement of the character of the street in any case where it is desirable that the character of the street should be improved, or

(iii) would injuriously affect the amenities of the borough,

they might refer the question of the approval of the particulars to a "board of appeal," constituted for the borough, of whom one member should be a fellow or associate of the R.I.B.A., to be nominated by the President of that Institute, one member should be a fellow or professional associate of the Chartered Surveyors' Institution, to be nominated by the President of that Institution, and one member should be a justice of the peace, to be nominated by the Council. It was provided that a member of the Council should be disqualified from being a member of the board of appeal. The board of appeal should decide within one month whether, having regard to the grounds mentioned, they approved or disapproved the particulars, and their decision should be final and conclusive.

THE HEALTH EXHIBITION.

In connection with the Congress, a most interesting exhibition is open, at the Dome, of appliances for housing, general sanitation and all matters relating to health and physical welfare. Certain exhibits make this display of considerable value to architects, surveyors and builders, and those in the Southern Counties should make every effort to get there.

Messrs. Dent and Hellyer, Ltd., in addition to their display of specialist, hospital and domestic sanitary equipment, have staged an illustration of the simplified method of plumbing, popularly known as the "One-Pipe" system, which should create a large amount of interest among experts. This "one-pipe" system (see next page), although originated in this country, has, after being fully tried out in America, found its way back to us, its adoption here having been delayed owing to lack of elasticity in our bye-laws. The revived interest over here, we understand, is due to the increasing heights of buildings. It can be stated that, given suitable planning where the architect takes full advantage of the possibilities of the system, a more extensive sanitary installation can be provided for the same outlay than if the soil and waste pipe system were designed upon the customary or "dual" method of pipe layout. The "one-pipe" system definitely calls for expert planning, and a selection of the sanitary fittings with their attendant and suitable traps, with a full knowledge and experience of the problems involved. Adequate ventilation is the most important factor, which has, in addition to the advantages derived from passing a current of fresh air through the pipes, thus arresting deterioration, the duty of providing for the relief of both the tendency to syphon out the seals of traps, and the possibility of their being blown by compression. The result of all these considerations should be to place the planning of a plumbing installation upon a higher plane than that upon which it has been resting of later years, and should give a much-needed revival to the plumbing craft; also the necessary incentive to the architect to consider his layout in conjunction with his expert plumbing contractor. The stand number is 49.

Two of the objections that have been raised to that smokeless fuel, gas, as a form of heating have been, first, that gas fires have been prone to heat by convection rather than by radiation, and, second, that their design has left a good deal to be desired. The first of these objections has for many years been satisfactorily disposed of, and there are many types of fire which render void the old argument that "gas fires scorch the ankles but leave the rest of the body chill." The second objection has had more grounds for maintenance. Within the last year or so, however, certain fires made by varying companies have been of considerable virtue æsthetically. One of these, on view in this exhibition, "the Flambeau," is one of the most successful of the "imitation-coal" fires we have seen. Entirely gas-fired, the appearance of a brightly-glowing coal fire is realistically given. This is to be seen on Stand 50, where the makers, Messrs. Sidney Flavell and Co., Ltd., have also on view a thimble-tube boiler which will interest through its high efficiency. Sanitary indoor closets for use where buildings are not connected with public sewers are shown on Stand 30 by the Elsan Manufacturing Company. These are made in various styles, overground, self-emptying models for houses; underground tank models, and portable models, besides portable self-flushing models. The Interoven Stove Co., Ltd., are showing a convertible stove which should interest housing architects to no small degree. This "Selfix" stove is made in two patterns. One is of cast iron plates, which can be dismantled and packed for transit in small space; the other is designed for building into a brick recess. They are both fitted with a large oven, a large hot plate

for boiling, and a boiler capable of filling a 30-gallon cylinder. This is in addition to having an open fire. These and other stoves are to be found on Stand 43. Water softeners and automatic refrigerators are shown on Stand 46, by ELECTROLUX, LTD. The water softener is non-mechanical, and the portable model can be fixed to any tap in the house. There is a "Main Supply" model which can be fitted to the main, softening all water as it comes into the house. The refrigerators operate automatically, without motor or moving parts, by gas, electricity or paraffin.

A Press view of the exhibition was held on Saturday, when each member of the Press was conducted round the stands by one of the Council. This somewhat novel proceeding was much appreciated by the journalists, who, in the short time available, were enabled to gain a very clear impression of the exhibition, which in design and manner of housing marks a considerable advance over former displays. After the view, the Press were entertained to lunch by the judges at the Grand Hotel. Dr. Charles Porter, M.D., B.Sc. (Chairman of Council), occupied the chair, and Professor A. Bostock Hill, M.Sc. (vice-President), Dr. George F. Buchan, M.D. (Chairman, Executive Committee), Dr. James Fenton, M.D. (Chairman, Congress Committee), Mr. H. D. Searles-Wood, F.R.I.B.A. (Vice-President and Treasurer), and Dr. F. J. Allen, Mr. W. Lionel Jenkins, M.A., Mr. A. J. Martin, M.Inst.C.E., and Mr. A. Saxon Snell, F.R.I.B.A. (members of Council), and Mr. J. W. Dudley Robinson (Secretary) were amongst those present. A cheerful and informal meal was concluded by a vote of thanks to the Press, proposed by Dr. Buchan, while Dr. Porter briefly responded to the toast of "The Chairman."

Following are among the list of Judges' Awards :—

The Rogers Field Gold Medal.

Sidney Flavel & Co., Ltd., Leamington Spa.—Domestic cooking and heating appliances of pre-eminent merit.

Silver Medals.

The Carlton Pipe Joint Co., Ltd., Sheffield.—"Carlton" pipe joint.

Dent & Hellyer, Ltd., London, W.C.1.—"Non-Contact" island fountain.

Dent & Hellyer, Ltd., London, W.C.1.—Display of the "One-Pipe" system of plumbing and drainage.

Electrolux, Ltd., London, W.1.—Electrolux cleaning equipment.

Elsan Manufacturing Co., London, W.C.1.—Portable self-flushing "Elsan" closet.

Sidney Flavel & Co., Ltd., Leamington Spa.—The "Patriot" thimble tube boiler.

Sidney Flavel & Co., Ltd., Leamington Spa.—The "Metro" coke fire.

Interoven Stove Co., Ltd., London, W.C.2.—"Selfix" "Interoven" convertible stove.

Jones & Attwood, Ltd., Stourbridge.—"Tractum" chain-drive water wheel distributor.

Bronze Medals.

Dent & Hellyer, Ltd., London, W.C.1.—"Quantum" flush valve.

Harland Engineering Co., Ltd., Alloa, Scotland.—Harland "Swallowglide" sewage and sludge pump.

Soole & Son, Ltd., Richmond, Surrey.—Lead-lined door for X-ray departments.

Commended.

J. J. G. Saunders & Sons, Brighton.—Display of modern sanitary goods.

J. J. G. Saunders & Sons, Brighton.—The "Parcedoor" tradesmen's delivery hatch.

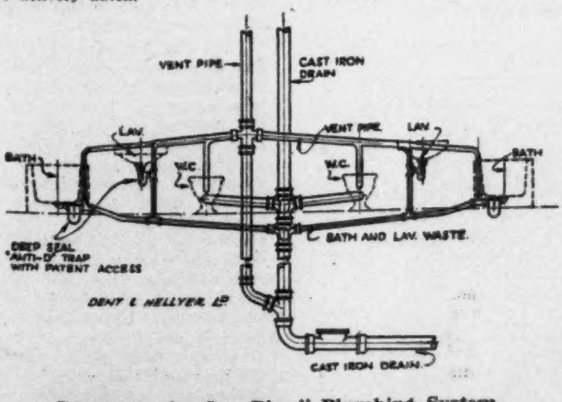


Diagram of "One-Pipe" Plumbing System.

HEATING AND VENTILATING CONGRESS.

THE annual summer meeting of the Institution of Heating and Ventilating Engineers was held this year at Folkestone, with headquarters at the Grand Hotel, under the chairmanship of the President, Mr. J. W. Cooling, M.Sc. (Tech), A.M.I.Mech.E.

On Tuesday morning, June 21, the members met for the special meeting, presided over by the president, a civic welcome to the town being extended to the delegates by His Worship the Mayor of Folkestone (Alderman J. W. Stainer, J.P.). After institutional matters had been dealt with, 17 new members being elected, the report of the Examinations Committee was received. The Chairman of the Examinations Committee (Mr. A. Watson) stated that 26 candidates presented themselves for examination, the examinations being held in London, Birmingham, Halifax, Norwich, Southampton and Glasgow. The number in London was 16, and the candidates who passed were 14. One candidate passed with distinction. It was stated that the Council at its meeting the previous evening had decided that the entrance fee for the Graduate Examination should be 10s. 6d., and that of the Associate Members' Examination should be £1 1s. That decision was ratified. It was stated that a very interesting programme of papers had been arranged for the forthcoming session.

Mr. Norman Wignall, A.M.I.Mech.E. (Member), then delivered a paper on "Heating and Domestic Boiler Ratings." The subject, he said, was one in which every heating engineer had a very definite interest, but at the present time it needed a person of more than ordinary intelligence to understand the methods in practice. The Boiler Ratings Committee of the Institution had already done good service in laying down various standard conditions under which heating boilers must be rated and tested, but it was important to notice that the report of that Committee made no mention of boilers intended for domestic supply purposes. It was well known that the output of any boiler was "elastic"; it could be stretched to, perhaps, 50 per cent. in excess of what might be termed its normal capacity. It had, however, to be borne in mind that the resemblance to elastic went still further, in that if it was continually being stretched beyond its normal capacity, it would eventually break. In addition, any overload to which a boiler was subjected was obtained at a lowered efficiency. That loss varied according to the design of the boiler. Every heating engineer should know the capacity and limitations of any boiler he installed. Where competition ruled there was always the temptation to the manufacturer to quote below a competitor by offering a smaller boiler, which, although it might be capable of the required duty, yet needed continual heavy firing to obtain the output, with consequent loss of efficiency and increase of running costs, apart from the shortened life of the boiler. The heating engineer should guard himself against such conditions.

Probably the most difficult and vexatious problem concerning the whole subject of boiler ratings arose from the different methods used in the rating of boilers used for central heating as against those for domestic supply purposes. The heating surface in the latter type was given a value twice, or even three times, that of the heating boiler. Most boilers for domestic supply used to take the form of a "firepot" boiler, the heating surface being mainly subjected to radiant heat from the furnace, tending to give such heating surface either a very high or comparatively low value at will, according to the condition of the furnace and the amount of fuel being consumed. Secondly, the quantity of water likely to be drawn off per hour in domestic installations was usually very difficult to estimate accurately; therefore, the heating engineer must perforce reckon on a peak load. The varying load no doubt explained the use of the "firepot" boiler, being a type which lends itself to "forcing" (so long as the firegrate was large enough to hold plenty of fuel, and the draught powerful enough to consume it), thus allowing a heavy load to be carried for a few hours of the day to deal with the "rush" period, while, at other times, the boiler was easily fired. The fact that considerable waste of fuel took place during the forcing period was too often overlooked. Surely it would be preferable for the heating engineer to ensure an adequate supply of hot water for the rush hours by suitable storage arrangements, and instal a boiler which could be worked easily and efficiently the whole time.

The difficulties, said the lecturer, existing at the present time were not of a type which could be left to themselves to solve, but had to be faced before they grew out of all proportion to their true value, as already appeared to be the tendency. Moreover, they must be faced from a technical standpoint, although the commercial interest in the subject was very decided. Boiler ratings should never be governed by any questions of price or quality of material; price should be the last consideration, and was inevitably governed by methods of production. Just as soon as these items began to be considered jointly, then any artificial rating which resulted would be useless, and would eventually receive its deserts—it would be ignored. Therefore, any standard rules or conditions adopted for the rating of boilers should be welcome to both, and deserve their mutual co-operation and utmost support.

In the evening, the President and Mrs. Cooling held a reception in the lounge of the Grand Hotel, which was followed by a banquet served in the ballroom of the hotel.

On Wednesday, June 22, the whole company assembled in front of the Grand Hotel, where a group photograph was taken. They then entered waiting motor-coaches and members' cars for the purpose of proceeding on the circular motor drive which had been arranged. Leaving the Grand Hotel, the party proceeded via Dover, Deal, Sandwich and Ash to Canterbury, lunch being provided at the County Hotel, at the invitation of the President and Mrs. Cooling. On the return journey, the party proceeded via Barham, arriving at the Grand Hotel at about 4.15, where tea was served, the company again being the guests of the President and Mrs. Cooling. This latter function proved to be a fitting ending to a thoroughly enjoyable Summer Meeting.

Private Companies.

The privileges and exemptions enjoyed by private companies are concisely stated in the new (15th) edition of "Private Companies," by Mr. Herbert W. Jordan. Published by Jordan and Sons, Ltd., Chancery-lane, W.C.2 (price 2s. 3d. post free), the information contained should be very useful to firms intending incorporation as private companies.

CAST CONCRETE AND ITS TECHNICAL PROBLEMS

A PAPER entitled "A Modern Craft Guild and its Technical Problems" was read by Dr. R. E. Stradling, M.C., D.Sc., Ph.D., M.Inst.C.E. (Director of Building Research), at the Northern Area meeting of the Cast Concrete Products Association, Ltd., held in the Leeds Institute recently. Mr. H. W. Jenks, the chairman of the Association, presided, and welcomed, in addition to members of the C.C.P.A., a number of local architects, engineers, and contractors who had attended at the Association's invitation.

After referring to the mediæval craft guilds, and a need for a return of their co-operative spirit in the building trade, Dr. Stradling said cast concrete makers were faced with something more than the making of strong, sound concrete, for their products had also to possess æsthetic qualities not usually demanded in concrete placed *in situ*. This certainly increased the difficulties of manufacture, but against it could be placed the advantages which could be obtained by proper use of the "factory" conditions possible to those who could make and "cure" concrete under rigid control not possible on most building sites.

Concrete had been made for thousands of years, but the traditional cementing material was lime. Portland cement was introduced about a century ago, and still suffered, as all new materials did, from improper use due to an attempt to utilise it in the same way and with the same technique as that prescribed by craft knowledge for the material replaced. This did not matter so much when the only work for which cement was used was mass concrete in foundations, heavy walls and the like. It began to matter seriously when reinforced concrete was introduced, for here a specific calculation was made as to the stability of the structure, and this calculation was based upon the assumption of definite and reproducible qualities in the concrete. This led to the demand for the control of the material within reasonable limits, and experiments began to be made in the endeavour to understand how the control could be carried out, but whilst this experimentation was in progress, engineers still had to make concrete, and certain "practical" rules were gradually worked out. Those rules did not always prove satisfactory, and as the engineer became more and more scientifically educated he began to apply in his work more and more of the results of the laboratory investigations, thus making his working rules more accurate and more useful.

When the technique of cast concrete products was studied, it was soon seen that a similar state of things existed. The processes were based partly on traditional knowledge taken from the old building crafts, partly on the newer knowledge obtained from laboratory investigations, the proportions depending upon the state of development of the particular works. As in all other trades not working to common rules and standards, the products of some works were good, of some not so good. Except in one or two special cases (*e.g.*, modellers) there were no craftsmen with long apprenticeship and journeyman experience, but a team of semi-skilled workers, carrying out a semi-routine factory process under the guidance of a technician; the efficiency of the particular works depended more upon the knowledge of the technician than any individual craft skill of other members of the team. Modern industries did not develop by craft skill but by intelligent guidance of workers by the application of "book knowledge." Craft skill was the old-time repository of knowledge gained by practical experience of nature, and books the modern method of storing and passing on to others for everyday use the information collected by practical experience and scientific research. There was a joy in craftsmanship, but let us not fail to realise there was also a joy in practising the applied science of the technician.

The first point to be grasped in the endeavour to understand the work of the cast concrete products maker was the fact that he was engaged upon the control of a chemical reaction between water and a cement usually of the Portland type. He attempted to make a hard, stone-like mass by causing the products of his chemical process to set round particles of stone, sand, etc. As in practically all such reactions, the result would depend on the amounts of the reacting substances and the conditions under which they reacted. He would consider this industrial process from that point of view.

FIG. 2.

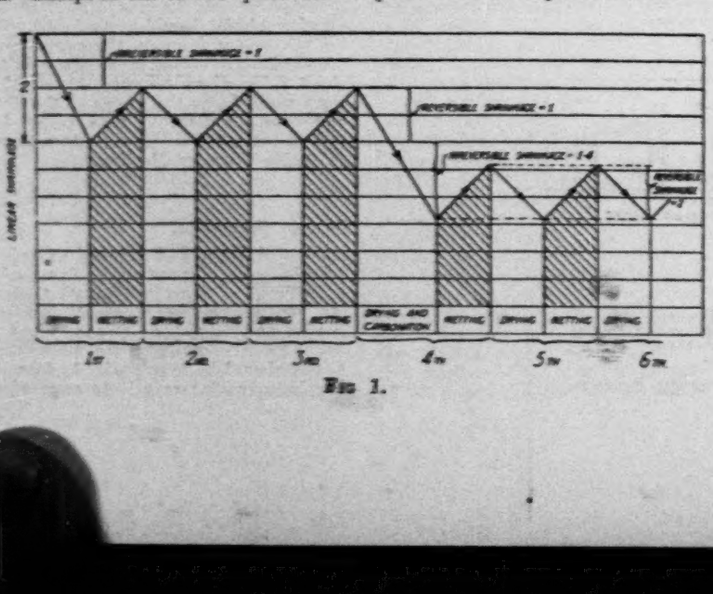


FIG. 1.

1.—Amounts of Reacting Substances.

The outstanding fact emphasised by both practical experience and laboratory work was the overwhelming effect upon the properties of the resulting concrete brought about by a variation in the relative proportions of water and cement.

In the first talk he gave to the Association at the time of its inauguration he showed some examples of silica gels and illustrated the shrinkage that took place on drying.

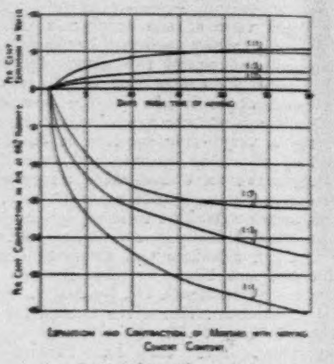


FIG. 3.

These gels, after making, shrank to about an eighth of their size, after which they expanded or contracted depending on the surrounding humidity conditions, but would never expand again to anything approaching the dimensions when freshly made. The cement used in concrete making possessed similar properties. They shrank, depending to some extent upon the amount of mixing water and showed the same phenomenon of a larger shrinkage on first drying and then an expansion and contraction depending upon the surrounding humidity conditions. Very much more could be said about those movements, for it was a most fascinating study, but time would not allow. It should be firmly grasped, however, that by far the greatest factor in correct concrete making was the accurate control of water used.

Up to a few months ago the subject would have been left at that point. Owing to the initiative of their Association, however, a great advance had been made in our knowledge of concrete. As a result of the research work carried out it was now known that the shrinkage movements of concrete did not end with drying out. A further movement could take place due to the action of the carbon dioxide from the atmosphere reacting with the hydrated cement. It was this further movement which was the major cause of crazing and like troubles. It was scarcely possible to exaggerate what a great advance in knowledge this really was, and it was the direct outcome of the Association's co-operation with laboratory workers. It was too early yet to give further details except to the co-operating members.

Thus the full picture of these movements due to moisture change could be thought of somewhat as follows: Suppose a specimen of concrete had not been allowed to dry out from the time of mixing until one was ready to take measurements of length changes. Now, on first drying, suppose the specimen shrank an amount represented by 2 units. Then on wetting again it expanded by an amount represented by 1 unit. On redrying it contracted by about 1 unit, thus reaching the same length as on first drying out. Rewetting and redrying now only caused the length change represented by 1 unit. If, however, the specimen be exposed to carbon dioxide until it was carbonated right through, a shrinkage took place equivalent to about 1.4 unit and this was, like half of the first drying out, non-reversible. After this had happened the specimen would still expand

and contract with wetting and drying by about the same amount as before, *i.e.*, unity. In Fig. 1 these movements were represented diagrammatically. It must be realised, of course, that the actual relative values given were only approximate ones.

2. Conditions under which Reactions Occurred.

In the previous section it was pointed out that the actual cementing material—hydrated cement—was a jelly-like material, contracting and expanding with changing humidity conditions. It was used to hold together inert masses of aggregate, and thus it could easily be seen that when the setting cement hardened and shrank around these "fillers," there would always be a tendency to compress these particles, the mechanical reaction being provided by tensile stresses in the cement itself. Thus, in considering the effects of surrounding conditions on the final concrete, it was necessary to keep in mind two distinct, yet interwoven, types. Not only did temperature, humidity, etc., affect the rate and possibly the final products of the reactions between water and cement, but also the physical effects of mechanical strain and the like introduced by the shrinkage and hardening processes. It was rarely possible completely to separate those two sets of conditions, and some of the greatest puzzles of cement concrete technique were due to that difficulty. A very small change in some apparently unimportant point in the process of concrete making might produce a very big effect on the final result and too much

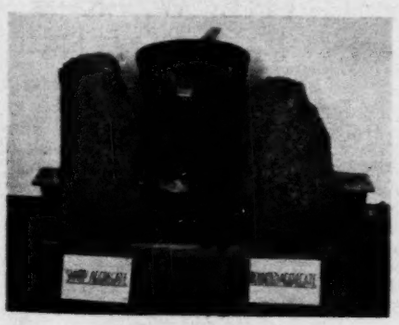


Fig. 4.

emphasis could not be laid upon the absolute necessity of rigid control at every conceivable point.

Time and space did not allow of a detailed examination of all the factors, and so one or two major ones only were chosen for mention. The first was the effect of the proportion of cement to aggregate and its effect on shrinkage. In Fig. 2 was shown a sawn-open concrete cylinder which was cast with a mixture which was too wet. Segregation of the aggregate took place on ramming, resulting in the concrete varying from a 1 : 1 mixture at the top to a 1 : 10 mixture at the bottom. Now consider Fig. 3, which gave curves showing the movements which took place in mortar mixes from 1 : 1 to 1 : 7 under conditions of water and air storage. In both cases the movements were reduced by about 50 per cent. by using a 1 : 7 mix instead of a 1 : 1.

So much for the effect of the relative amounts of cement and aggregate. It was of interest to try to realise what influence the shape of the aggregate had, for, in practice, it was often possible to choose between different shaped material, and the traditions of old mass concrete work was to emphasise the importance of *sharp clean* aggregate.

In Fig. 4 were shown two slumped cones and the original cone mould. Those two concretes had the same cement, same water content, same grading of aggregate, and same large aggregate (broken ballast). The only difference was in the sand used; the one on the left, with practically no slump, had a *sharp* sand, whilst the right-hand one, which

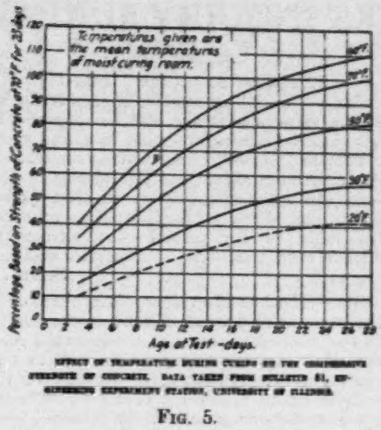


Fig. 5.

had slumped appreciably, had a well-*rounded* sand. The right-hand one was a good plastic mix, easily worked into moulds, whilst the left-hand specimen was an unpleasantly harsh mix which required very hard ramming to compact properly. Both mixes had practically identical strengths.

To look at it another way: it would be realised that a well-rounded aggregate produced a much more workable mix with the same water content than a sharp aggregate would do. Or, if they had fixed the degree of workability required for the particular job, then the use of a rounded aggregate enabled this to be obtained with *less water* than if a sharp aggregate were used. This was very important indeed, for, as already mentioned, the less water used within practical limits the stronger the concrete, and, what was probably of more importance to the cast products maker, the denser and more durable the concrete and the greater its resistance to crazing.

Space would only allow the mention of one other important factor—curing. Fig. 5 was taken from the results of work carried out at Illinois. It indicated the effect of temperature of moist curing upon the strength of the resulting concrete. It would be seen that the higher the temperature the greater the rate of hardening and the higher the ultimate strength. It must be clearly borne in mind that this was *moist* curing and the concrete was not allowed to dry. Fig. 6 was taken from work at the Building Research Station and showed similar effects for rapid hardening Portland cement. Particular attention should be paid to the lowest temperature curve (43 deg. F.), for whilst this was well above freezing point, it had resulted in practically nullifying the rapid hardening properties of the cement. Thus, particular care should be taken in cold weather to see that those lower temperatures were not reached by cast concrete products if the normal advantages of rapid hardening cements were required. Again, the conditions of Fig. 6 were those of moist storage.

The next diagram, Fig. 7, was taken from Abram's work, and showed the effect of early

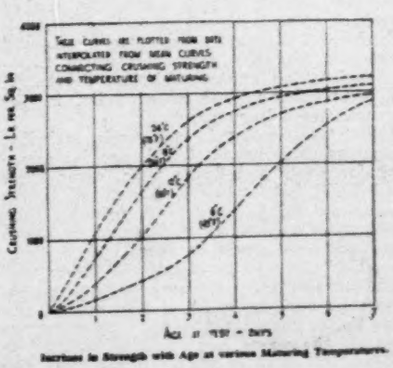


Fig. 6.

drying out. It would be seen that the longer the period of moist storage before drying out, the stronger the resulting product. This should be clearly realised in thinking over the implication of the two preceding diagrams. If higher temperatures were used for curing, then it was essential that moist conditions should also be assured, for drying atmospheres (so likely to occur in heated sheds if special precautions were not taken) might produce exactly the opposite effect to that for which the specific heating conditions were installed.

These brief mentions of a few of the essential factors in concrete making seemed to emphasise how important it was that strict technical control should be exercised whenever concrete was made. But particularly was this the case in cast concrete products, for minor blemishes of little account in large engineering structures became of serious import in building materials which relied for their market upon satisfying not only strength requirements, but also demands for a good appearance and good weathering properties.

There was no doubt whatever that those demands could be met if makers would investigate the technical problems involved and then apply the results to a rigid control of their works. Makers had their opportunities to an extent utterly impossible to concrete users on engineering work. Rigid factory control was certainly not only essential, but possible. The technical problems still to be solved were many and difficult, but quite capable of solution by co-operation between the men with practical experience in the industry

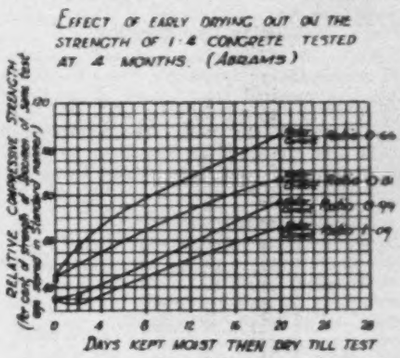


Fig. 7.

and the men with laboratory experience. Neither could solve the problems in any reasonable time alone.

If the Cast Concrete Products Association so developed, they had a magnificent future before them, in his opinion; not only a big industrial future, but a part to play in giving a lead to other sections of industry. The Association had made an excellent start in a way which was perhaps best realised by someone outside who was yet brought into close contact. He met many industrial research committees in carrying out his duties, but he could truthfully say that no other was quite so inspiring as theirs. They had placed on their research committee a group of men with very diverse experiences and interests, yet all keenly believing in the need of research and all willing to give to the work their practical experience in no stinted manner. No rest should be taken till they had assured the support of every cast concrete product maker in Great Britain. One maker outside, not keeping pace with modern technique, could hold up the industrial expansion of the whole industry. Their Association was closely allied to the best traditions of the old guilds. They were not concerned with the fixing of wages or prices; they were concerned with the full development of their industry.

The lecture was followed by a meeting of the subscribers to the Co-operative Research Scheme, at which Mr. Brady, M.Sc., A.I.C., reported, in a most instructive lecture, illustrated by lantern slides, the results of the investigations to date.

ARCHITECTS' & BUILDERS' INQUIRY BUREAU

QUESTIONS.

Copperas and Brickwork.

SIR,—I am interested in the colouring of brickwork, and have been informed that copperas—green for preference—is an excellent binding agent. I have seen brickwork which, to my knowledge, has previously been cleaned down with an alkali, treated with copperas tinted, and in many cases efflorescence has ensued. Also, in some instances, an irregular patchy effect has followed. Having regard to the above results, I am dubious about the claims of copperas, and should like to know whether the material is suitable or whether there is any better. Have the unsatisfactory results mentioned anything to do with a reaction of the bricks? Full information would be greatly appreciated.

W. G. B.

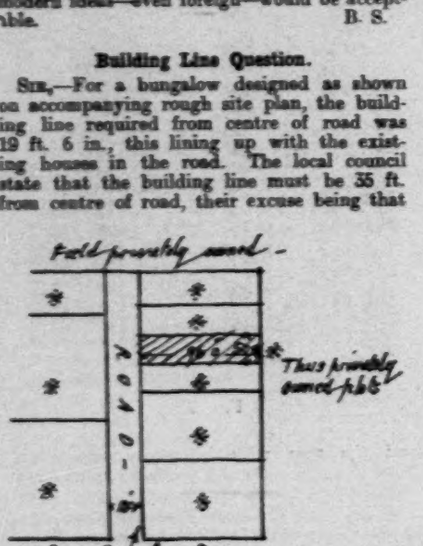
Special Door Required.

SIR,—We should appreciate suggestions for a small door, proposed to be let into the brick wall of a cottage, with the idea of connecting a sitting-room with present outside earth sanitation. The door would be used only in bad wintry weather. The wall is an east wall. The door can be only about 15 in. to 19 in. wide, and must fasten very tightly in order to avoid draughts and possible smell. We would go to a good deal of expense to get a suitable door, but require full details for a jobbing builder. Any modern ideas—even foreign—would be acceptable.

B. S.

Building Line Question.

SIR,—For a bungalow designed as shown on accompanying rough site plan, the building line required from centre of road was 19 ft. 6 in., this lining up with the existing houses in the road. The local council state that the building line must be 35 ft. from centre of road, their excuse being that



the extra 15 ft. 6 in. may be required for road widening at some future date, although they have stated that for this purpose they would not require more than 7 ft. 6 in., but still maintain that our building line must be 35 ft. The site is very small, and being in a country district, we have to provide for a well, septic tank, and vegetable garden at the rear of the premises. Are we compelled to accept this given building line of 35 ft., and is there any authority, apart from the local authority, to whom we can appeal?

C. H. P.

ANSWERS.

Lettering.

[ANSWER TO "STUDENT," JULY 8.]

SIR,—The full development of the true Roman type of lettering arrived with the Renaissance, and passed through much the same transitional stage as did architecture, showing marked Gothic influence in Tudor times, which grew less marked in the early Jacobean, until full emancipation about the end of the seventeenth century.

LETTERING

Arbitration.

[ANSWERS TO "CASE," JULY 8.]

SIR,—"Case" is correct in his rendering of the rules of evidence, and he may also be assured that a witness cannot be forced to incriminate himself under cross-examination. An arbitrator should exercise strong control over the cross-examination, so that points are not registered by implication to influence his mind on the refusal of a witness to answer such questions as indicated above.

SCALES.

SIR,—The law of evidence in arbitration is the same as that which obtains in the courts. In the cross-examination of a witness the rules are, that any question may be put to test the accuracy, credibility, or veracity of the witness or to shake his credit by injuring his character or reputation. To this end, leading questions may be put arising out of the examination-in-chief and they should be confined to the latter by the arbitrator. The examination-in-chief is conducted with the view of establishing the character or reputation of the witness; whereas the cross-examination is to shake his character or reputation.

There are very few instances in which a witness can claim privilege and refuse to answer, even if, by the answer, civil proceedings might be incurred. Of course, if the answer would incriminate himself in criminal proceedings, he can refuse to answer. (See Creswell on "Procedure and Evidence in Arbitrations.")

LEX.

Pisé de Terre.

[ANSWER TO "COSTS," JULY 8.]

SIR,—The now famous bungalow at Newlands Corner, which was built immediately after the War as an experiment in economical construction, still stands to be seen, and has weathered well. Costs at the time of building showed a considerable saving over other forms of construction, but it is very doubtful whether now, with plentiful supply of materials, it would prove a relatively economical proposition.

EARTH.

Mahogany.

[ANSWER TO "BRITISH," JULY 8.]

SIR,—Unfortunately, up to recent times, British Honduras was sadly deficient in the necessary plant for converting mahogany logs, and these were sent to America, where they were converted and re-exported. This will account for the apparent origin of mahogany described rightly from Honduras.

EQUIPMENT.

Wall Board v. Plaster.

[ANSWER TO "W. G. N.," JULY 1.]

SIR,—The comparative costs between the following depend upon the amount of noggings required to allow the edges of the wall boards to be properly fixed, the disposition of the cover fillets, and also whether cover fillets are not used and the joints between the wall boards filled in and surface covered with lining paper and wallpaper. Where wall boards are fitted to existing timber framed partitions, it is safe to allow ¼ cu. ft. of timber in noggings per sq. yd. With 2 in. by ½ in. plain cover fillets (not moulded, which would necessitate scribed work or patera), spaced at vertical intervals of about 2 ft., with, say, two horizontal members, and the vertical members finishing against an existing skirting, the height of room being normal, about 6 lin. ft. per sq. yd. would be required.

The total cost of such work, including noggings, wall board at 3¼d. per ft., allowing for waste and fixing same, cover fillets and nails, but excluding decorations (which might be more costly with panelled than with plain surface work), the cost of labour and materials would be about, per sq. yd., 4s. 11d. If the partitions are newly constructed and the framework set out at distances to suit the width of wall boards, and additional noggings are not, therefore, required, the above cost could be reduced by about 7d. If cover fillets are not used, but the joints are filled ready for, but not including, lining paper, a further saving could be effected of about 9d. Lathing, plastering and setting costs about 2s. 9d.; lathing, plastering, floating and setting costs about 3s. 3d.; plastering with sand and cement, and setting in Sirapite on brick walls or breeze slab partitions, about 2s. per sup. yd. The above prices do not include the ordinary timber framed partitions, 2½ in. breeze slabs and 4½ in. brickwork, which would cost about 1s. 9d., 3s. 6d., and 5s. 6d. respectively per sup. yd.

The prices are actual cost of labour and materials, and do not include a percentage to cover insurances, water, plant, supervision, establishment charges and profit, which would vary, according to the size of the job, from 20 per cent. to 33 per cent.

R. V. BOUGHTON.

Thermal Conductivity.

[ANSWER TO "THERM," JUNE 24.]

SIR,—The thermal conductivity of cinders varies very widely with the extent of combustion which has produced the cinders. With well vitrified and stable material the thermal conductivity may be taken as roughly equal to that of dry, hard gravel.

HEAT.

Covering Capacity of Pavings.

[ANSWER TO "PAVIOUR," JUNE 24.]

SIR,—Bricks of standard size laid flat cover roughly 30 superficial yards per thousand and roughly 20 superficial yards per thousand if laid on edge. Clinkers, laid in herringbone fashion, will cover roughly 7½ yards super. Paving bricks on edge cover about 12½ yards.

COVERING.

THE WEEK IN PARLIAMENT

WESTMINSTER, Wednesday.

Town and Country Planning Bill.

On report of this Bill in the Lords, LORD BERTIE OF THAME moved an amendment to secure that in all planning schemes involving housing development on a large scale opportunities should be given to the representatives of all denominations to secure suitable sites for building places of worship, and, secondly, to ensure that where the authorities of these denominations, by foresight, had secured such sites beforehand, they should not be lost to those denominations by reason of a town-planning scheme being produced.

LORD SALISBURY said that unless it was quite clearly recognised by the local authority that this provision for places of worship was really essential in any building developments in this country, a great wrong would be done to a great number of His Majesty's subjects. It was not new that in our legislation special recognition was given to places of worship, and they were treated as particular cases which should have special regard paid to them.

The LORD CHANCELLOR, on behalf of the Government, accepted the amendment in a slightly altered form.

LORD CRAWFORD complained that the amendment dealt with a complicated matter off-hand. It created and acknowledged a claim on the part of any religious denomination in any scheme, even a regional planning scheme, in any part of the country, whether urban or rural, to a site for a church, a burial place, a parsonage or ministerial residence. That was a right which the existing statutes did not confer. They could not set out in the schedules to the Bill the individual types of buildings for which these schemes should make provision. Here alone they laid down the right of any denomination to exercise its claim to three sites, one for the church, one for the burial ground, and one for the vicarage house. It was very objectionable that religious bodies should have a right in these schemes to claim a site for a burial ground. They did not want burial grounds scattered all over Great Britain. He was sorry that so controversial a matter should be inserted in this town-planning scheme, which he thought was outside the area of controversy.

The amendment, as amended, was agreed to.

THE BUILDING TRADE

HINTS ON BUILDING PRACTICE.—III

By J. R. TAYLOR.

BUILDERS' PREMISES—(*Continued*).

The requirements of a builder's premises will vary, within wide limits, in accordance with the extent and nature of his business and by reason of its situation. In a large town that has several keenly competing builders' merchants, it is probably just as economical to deal with them as to deal with the manufacturers direct, and therefore not nearly so much storage space is required by the builder in such cases as when his business is in a small town or rural district. In a small town it may pay him to carry a very good stock and allow it to be known that he is willing to retail small quantities. This is particularly profitable in a small country market town, for a good many farmers purchase building materials themselves and engage village craftsmen to carry out the work. They are also frequent buyers of serviceable second-hand materials, and in many other ways their custom is worth cultivating.

Ironmongery Stores.

At the outset the office is frequently made a sort of dumping place for all manner of ironmongery, with the result that the proper work of that department is carried on under difficulties. There are advantages and disadvantages in making the office responsible for the issue from locked-up stores, but such issue should be made from a store and not from the office shelves. If an extensive jobbing trade is carried on, it is often only in the office that the necessary facts are known about the job requirements. A lad may come in with a chit from one of the joiners requiring, say, a pair of four-inch butt hinges, and only in the office will it be known whether a pair in cast iron or a pair of the best quality steel is really what is wanted, and the difference in price will be some hundreds per cent. And so it is right through the range of builders' ironmongery, which varies very considerably in quality and cost, which is the principal reason for putting it in charge of the office. But as soon as ever the business can bear the cost, it is true economy to make store-keeping a whole-time job, and to couple it up with a general responsibility for plant. A good store-keeper should know where every individual article of plant is, and exactly what is in stock at any time that the information is required. To do this, he must know where everything goes, and what, if any, are the returns; records of this sort are invaluable to the office when making up accounts. The storekeeper's desk should be in the ironmongery store, and it will need but a glance at his shelves, pigeon-holes, bins, drawers and index cabinet to assure the principal that he has here a staff member earning his pay by the saving of time and materials that would otherwise be wasted or lost.

Cement Store.

Up to comparatively recent times the proper thing to do with cement was to spread it out on a dry, wooden floor to cool, and re-bag it before putting it into use—or, at least, so said the specification writer. To-day, provided that the builder deals with an English firm of manufacturers of repute, such methods are unnecessary. The Building Research Station has been able to reassure us even on a point that at one time was the occasion of much nervousness, namely, finding the cement to be hot when into a bag of it an arm was plunged up to the elbow by a labourer.

The main requirements of a cement store are that it should be dry, be ventilated in such a way as to remain dry—that is to say, be unlikely to be affected by moisture-laden air—and be suitable as regards accessibility and ease of handling of material. It will pay to give attention to these matters, for laxity is the cause of a good deal of waste.

For jobbing work it is a good plan to have a large bin with a hinged flap cover, so that damaged or partly emptied bags can be discharged into it, and small quantities returned from the jobs be put in instead of being allowed to go hard in the bottom of a bag or bucket.

Most builders carry three sorts of cement in stock—ordinary Portland, rapid-hardening and aluminous; but for work that is not carried out in compliance with an architect's specification, a better appreciation of the superiority of well-known makes of rapid-hardening cement would lead to its being regarded as the main stock. Owing to the greater strength attained, a leaner mix of rapid-hardening may be safely used, provided the proper manufacture of concrete is controlled throughout, than of ordinary cement, and the advantage of speed may therefore be obtained without increase in cost. Of recent years not one failure in a hundred has been due to any fault in cement obtained from reputable English manufacturers, the real causes of trouble being faulty aggregates and sands or poor workmanship.

The floor of the cement store may be of concrete, but the bagged cement is better placed on stout wooden benching fixed at the same height above ground as the van or lorry bottom. So placed it is easy to handle, is kept out of reach of accidental damp and dirt carried in during the winter months, and is unlikely to have anything else placed on top of it. If it is bought in paper bags, the cement from any bags that have arrived in a damaged condition should be transferred to others before being placed on the shelves. If possible, it should be ordered at just the right time so that the small remainder on the shelf may be either added to the jobbing bin or brought forward for early use when the new comes to hand. Aluminous cement should be kept apart, as it is very susceptible to contamination, and ill or disappointing results may follow if even only a very small quantity of ordinary cement becomes mixed with it.

Common plaster and Keene's cement are best stored in bins on arrival, and the bags may be then returned to makers for immediate credit. For jobbing purposes, small, stout paper bags, such as those used by grocers for packing sugar, may be sent out, and for new works of small size, where only a few hundredweights are required, the additional trouble of re-bagging in four-ply paper bags is not great, and is more than recouped by the saving of waste in other directions. These bags should, however, be of distinguishable colour, so that any returns may not be thrown into the wrong bins.

The general lay-out of the cement store may be on the lines of a range of stabling, with loose boxes at the ends and stalls between them. A bench shelf about 4 ft. wide on all walls will accommodate bagged stuff, and above this may be another wide shelf taking plaster laths, metal lathing, etc. It is a good plan to line the walls between these two shelves with rough boarding on grounds, so that the bags shall not be in contact with the walls, and thus draw moisture. A modelling bench under the window will be useful on occasion. Other stores required by the on occasion. Other stores required by the plasterers will be accommodated, but anything not belonging to this branch should be rigidly excluded.

Timber Storage.

At the timber merchant's, large quantities of timber are piled in the open for air drying, and at one time the builder adopted the same method; but to-day this does not usually apply. Road transport has had something to do with the change, for it is now more economical to take carcassing stuff direct to the job and to order it to exact requirements than to sort and cut it at the builder's yard. The builder will still, of course, carry some stock of carcassing timber, but it will be small in comparison with what was carried formerly. But to obtain and maintain a reputation for turning out good joinery (and to do so is to win more than half the battle) the builder must carry and condition stocks of timber for that purpose, and every stick of it should go under cover. It should be carefully piled in such a way as to invite air currents and to keep its shape. On the other hand, for the best results in high-class joinery it is undesirable to force planks which, by reason of influences present while growing are inclined to twist, back to an even plane by weighting them. The proper way is to true them up on the surface planer and then thickness them; but if they are badly twisted this results in a lot of waste. Less waste will result from cutting them into short lengths. Having shapely planks to start with, a twist should not be imparted to them by want of care in piling. The first packings on which they are to lie should be carefully levelled and sited, and the packing pieces that will follow on between each layer should be thicknessed. This to the inexperienced may sound a little unnecessary, but it pays in the end, because it saves time in the working up. It would take up too much space to go thoroughly into detail in regard to timber storage and seasoning, but it is a subject that well repays study and should be "read up."

In regard to the storage of mouldings, plywood, small quantities of the rarer and more expensive woods, etc., it is well to keep these out of the way of ordinary traffic and in a place to themselves. If the reader will turn to last week's plan of a small mill and joiner's shop, he will follow this suggestion. Carry up the joiner's shop, but not the mill, for two stories and form a floor with a well space in the centre of about 10 ft. by 10 ft. clear opening, and put a loading door over the joiner's shop double doors. The upper floor can then be devoted to our present purpose, and the well will not only admit top light to the shop, but allow mouldings or other material to be handed down easily to the benches below as and when required. Up aloft there will be a constant movement of air if ventilators are placed in the gable ends, and the material there stored will attain the right degree of dryness for use in first-class work.

(*To be continued.*)

L.C.C. Housing.

The report of the L.C.C. Housing Committee, presented to the Council on Tuesday, contains the information that under housing schemes undertaken by the Council since the war, the number of houses and tenements completed, up to June 18, 1932, was 49,014. There are 2,476 further houses and tenements under construction.

The Municipal and County Engineers' Presidency.

Mr. Thomas Somers is the new President of the Institution of Municipal and County Engineers. He was educated at Woodside Public School, Glasgow, and attended engineering classes at the Glasgow Technical College. On completion of his apprenticeship under the late Master of Works, Glasgow, Mr. John Whyte, he was appointed assistant engineer. In 1910 he became principal engineering assistant to Mr. Thomas Nisbet, then Master of Works of the City. On Mr. Nisbet's retiral in 1924, he was appointed Master of Works and City Engineer. Mr. Somers is a member of the Institution of Civil Engineers and a Fellow of the Royal Sanitary Institute.

ADVISORY COUNCIL FOR THE BUILDING INDUSTRY

The annual meeting of this Council was held on Wednesday, June 29, at the premises of the R.I.B.A., 9, Conduit-street, W., the chair being occupied by Mr. Maurice E. Webb, M.A., F.R.I.B.A. In opening the proceedings the chairman referred with deep regret to the great loss the Council had sustained through the death of its President, Lord Khuty.

After some formal business had been transacted, the Chairman submitted the report of the Executive Committee, giving details of the work of the Council during the preceding year. The machinery of the Council, he said, comprised an Executive Committee and five Panels. The executive duties of the Council were vested in the Executive Committee. As to the functioning of the Panels, it was felt that the greatest degree of freedom, commensurate with the objects of the Council, should be allowed them. In making a somewhat cursory survey of the work of the Panels, it would be seen, he thought, that the subjects before them fell into two fairly well-defined categories, namely :—

(1) Those with respect to which legislation and public control had grown to an extent which had become a retarding influence; and

(2) Those with respect to which there was very little in the way of controlling legislation or regulations.

It would appear to be the task of the Council to (*a*) reduce the mass of legislative control which was felt to be burdening and retarding certain phases of building construction and technique, and (*b*) to see that the necessary degree of co-ordinated control in the form of basic regulations with respect to the newer equipment and practices of the industry was such that it would not create those same disadvantages to which the older forms of building construction and equipment had been subjected for so many years.

The time would appear to have arrived when the widest possible degree of freedom should be granted to all qualified practitioners within the industry. That might be regarded as an unduly long view, but there was no reason to believe that its attainment was not due. The advance in building technique and in professional practice no longer warranted the type and form of public control which was perhaps necessary in the period between 1840-1891, during which the roots of our modern mass of legislative control were planted. Bearing upon this aspect of the work of the Council, it was decided at the last meeting of the Executive Committee to create a Panel to examine, investigate, and report upon the effect on the industry of the present form and extent of public control and administration, both with respect to building practice and to costs. This Panel would have a most difficult and complicated task before it, but it was essential, if the best was to be obtained from the work of what might be termed the more technical Panels of the Council, that some complementary action should be taken with a view to ascertaining the practicability of reducing the extent of administrative control now exercised over the industry.

The *Building Acts Panel* had submitted to the L.C.C., through the Advisory Council, a commentary on the London Building Act, part by part, and section by section, embodying the views and policy of the Advisory Council as far as such could be formulated at the dates in question. Among the recommendations thus put forward to the L.C.C. was one that the Code of Steelwork Practice evolved by the Department of Scientific and Industrial Research should be adopted for London. This had now been done. This Panel, having more or less completed its first task, namely, the Council's commentary on the London Building Act, 1930, would now bend its energies to the consideration of the wider field of building legislation concerning those parts of the country outside the administrative area of the London County Council.

The *Sanitation Plumbing and Water Installation Panel* had examined and reported upon the Drainage and Sanitary By-laws of the L.C.C. It had submitted a report on this part of its work to the Executive Committee, who had approved and formally submitted it, on behalf of the Council, to the L.C.C. The Panel was now in process of examining Series No. 4 (Urban Authorities) of the Model By-laws issued by the Ministry of Health. This Panel had also been engaged on an investigation into what was commonly known as the "One-Pipe" system of sanitation, and had organised, with the approval of the Executive Committee, and under the auspices of the National Association of Water Users, Ltd., the opposition of the Council to powers sought by the Metropolitan Water Board with respect to the stamping and testing of fittings under Clause 12 of a Bill presented by that Board to Parliament. As a result, the powers left in the Bill were less onerous than they would otherwise have been. The Panel has also been in negotiation with the Institute of Plumbers on the matter of the institution of a "Minimum Code of Plumbing." The wider consideration for allowing internal water-closets was also an outcome of their recommendations.

The *Electrical Equipment Panel*. The objective of this Panel was to obtain co-ordinated regulations for the proper control and administration of this branch of building equipment, at the same time ensuring that such regulations were sufficiently fluid as not to act in any way as a check on the progress of applied electrical science. The Panel had submitted a most instructive interim report to the Executive Committee which indicated the line of development its final recommendations were likely to follow.

Lifts and Escalators Installation Panel. Having regard to the special technical nature of the investigation before this Panel, it was decided to form a sub-committee of seven members to make a preliminary survey of the technical matters involved. The sub-committee expected to submit its report to the Panel in the course of the next six or eight weeks. The Panel would then proceed to consider this report, and in due course submit its report to the Executive Committee.

Fire Prevention Panel. This Panel had produced a report on fire prevention and on the means of escape from fire in buildings, which in its detail and scope, he believed, had never been equalled in the range of its application. By the application of the formulæ and terms of this report it was now possible for an architect to plan the whole of the means of fire prevention and escape facilities in any building in accordance with the best practice in most countries of the world. This report had been forwarded to the Advisory Committee of the L.C.C., who had set up a special sub-committee to consider its application and the possibility of its terms being adopted in the report of that committee. The Panel was now proceeding to deal with the next item on its programme, namely, the effect of fire insurance regulations on the practice of building.

In conclusion, the chairman formally moved the adoption of the report of the Executive Committee. This motion, having been seconded by Mr. W. H. Gunston, was put to the vote and carried unanimously. The financial statement, which had been previously circulated, on motion made and seconded, was unanimously adopted.

On motions made and seconded, the officers and council for the ensuing year were elected. The list was given in our last issue, on page 46.

The proceedings terminated with a hearty vote of thanks to the Chairman for presiding.

An Architect's Estate.

Mr. Walter Butler, of Percy-place, Dublin, architect and civil engineer (personal in England and the Irish Free State), left £17,428.

BUILDING TRADE WORKERS' CONFERENCE

The ninth National Delegate Conference of the Amalgamated Union of Building Trade Workers commenced at Cardiff on Wednesday and concludes to-day (Friday).

The presidential address was read on the opening day by Mr. George Waddell, who referred briefly to the work of the year. It was necessary, he said, to keep abreast with the actual facts of employment in the building industry. Changes were crowding on the industry, and the speedy realisation on the workers' part of those changes, and all their implications as regarded the vital interests of members, and the adaptation of organisation and policy thereto, was of great importance. The introduction of new methods, largely of the American pattern—like the time and progress schedule—particularly on big building jobs, called for new methods of approach and increased activity and vigilance on the trade union side.

As regarded the Approved Society side of the Union's work, he regretted the legislation which the present Government had considered necessary. The social insurance services, which had been a credit to the nation, were gradually being eaten into in the name of economy. Prolongation of insurance, which had proved such a boon to the unemployed, was abolished. In its stead we had reverted to the old order. Men and women, unemployed already, in spite of reduced incomes, were now compelled to pay arrears of contributions if they wished to keep in benefit. Worse than that, they had the threat of those unfortunate persons having to cease insurance altogether, if they were not successful in obtaining employment within the next year or so. As to wages, under the new National Wages Agreement, the building operatives experienced a further decrease in wages of ½d. per hour last February. That decrease was, in many instances, mitigated by upgradings in a number of towns. While the new agreement was not what the operatives would like it to be, it might be worse than it was.

Operatives still endured the disadvantages of wet-time. Last September members of the Joint Committee on Wet-Time met the Ministry of Labour. A lengthy discussion took place. Arising from that discussion, the Ministry of Labour issued a questionnaire to the employers to find out : (*a*) The extent of the interest in a scheme of insurance against time lost through stress of weather, and (*b*) the extent of the time so lost. The present Minister of Labour had issued instructions to take no further action. Thus, the operatives were where they had been in regard to this grievous question. It was clear that the initiative to action must again come from themselves.

They could not but regard with deep concern the calamitous condition of the building industry. What was becoming of the industry on which their livelihoods depended? They simply could not remain quiescent when 250,000 building operatives were unemployed, and at least 1,000,000 men, women and children were being compelled to undergo continuous anxiety and privations of a monstrous character, incalculable distress and suffering. The public authorities were doing their utmost, in the name of "economy," to stifle the very life of the building industry. Unemployment, in itself, was the very opposite of economy. Intelligently directed labour was of value—was an added economy in itself. The villages, towns and cities needed modernising. "Except for a hundred or two buildings, London needs to be rebuilt from end to end," said Professor Lethaby, some years ago. The same could be said of Manchester, Birmingham, Glasgow, Leeds, Sheffield—indeed, of all the big industrial centres. Viewed from every standpoint, it was the highest economy—the surest and most profitable of all business propositions—to demolish the slums and build decent houses for the people; to get rid of the uneconomic roadways, the uneconomic industrial buildings, the uneconomic trading centres.

WESTMINSTER REDEVELOPMENT

It has often happened in the history of great cities that large areas, after serving a certain purpose for many years, have suffered a period of eclipse, and ultimately changed their character in the inevitable process of redevelopment. This has been the history of a large part of Westminster in the neighbourhood of Smith-square, lying immediately to the south of the Abbey. Until a few years ago, notwithstanding a few sedate streets of eighteenth-century houses, this was one of the most squalid parts of London. Now, however, a great transformation has taken place. First, we have had the rebuilding of Lambeth Bridge, which, together with the replanning and widening of the Embankment roadway and adjacent streets, has opened up the entire Grosvenor-Millbank Estate for redevelopment. Many great new buildings have already been erected, including the Imperial Chemical Industries' headquarters and the immense office blocks known as "Thames House," as well as a large number of business and other premises in the immediate neighbourhood. Large areas are still available for redevelopment, including a number of freehold island and other sites, specially suitable for the erection of business premises, residential flats, and so forth. With its greatly improved traffic communications, and its easy accessibility by train, tram and bus, the area offers very definite attractions, and within the next few years is likely to be completely transformed, to the great benefit of the Metropolis. We understand that particulars of available sites may be obtained from the estate office of the Associated London Properties, Ltd., St. Ermin's, Westminster.

ARMY VOCATIONAL TRAINING

In connection with the Aldershot Show, which was held recently in the Rushmoor Arena, there was an excellent display of work by students of the Army Vocational Training Centre, Aldershot, whose very successful efforts to equip the soldier for civil life when the time comes for him to leave the Army, have been frequently referred to in our columns. On the present occasion the work displayed was of the usual varied character and the same high standard of craftsmanship. The chief items of interest were painting, decorating and signwriting, plastering and concrete casting, bricklaying, plumbing, copper pipe fitting, heating and domestic engineering, carpentry and joinery, cabinet making, French polishing and upholstery, welding, sheet metal working, fitting, and electrical work.

What struck one chiefly about the decorative trades was the advantage which the students had taken of the scope allowed them in the free use of their imaginative powers and observation. More particularly, perhaps, was this to be found in the examples of plastering and concrete casting. Freedom of expression was also to be found in that section devoted to painting, decorating and signwriting. The examples of broken colour effects and plastic paint finishes revealed abundant evidence of painstaking care allied to artistry. There was a commendable collection of posters in oil and water colours.

In the plastering and concrete casting section, the dominating feature was a Roman Doric scheme of plasterwork, containing pilasters, entablature, modillion cornice and niche. Notable examples of brickwork included a brick fireplace, a garden seat, a gauged brick sundial, and a Venetian arch. A high standard of technical excellence was also observable in the "heavier," or more mechanical, trades and crafts, in which the students handled delicate tools and machinery with all the competence of trained craftsmen.

BUILDING ACT ADVISORY COMMITTEE

The Advisory Committee set up by the London County Council to consider the amendment of the London Building Act, 1930, has reported to the Council with regard to fire-resisting materials in the construction of buildings. Points from the report are:—We have had under consideration the requirements of the London Building Act, 1930, with regard to the use of fire-resisting materials in the construction of buildings. These requirements . . . do not meet modern circumstances. In our opinion, it is now necessary to make regulations for the fire resistance of a building as a whole by stipulating the grade of fire resistance of the constructive elements, having regard to the size, location and purposes of the building. Such regulations would simplify procedure and facilitate the work of officials, besides tending to reduce costs to building owners and minimising general fire risks. The First Schedule to the Act of 1930 specifies the constructive elements of materials which shall, for the purposes of the Act, be deemed to be fire resisting. This list is incomplete, and it is becoming increasingly difficult to provide by its means for developments in new materials and methods of construction. . . . We feel that reports on elements of construction which are to form the basis for acceptance under the London Building Act should have behind them completely independent authority. We understand that the Department of Scientific and Industrial Research is convinced of the importance of such testing, but that before taking action in the matter the Department is conferring with industrial interests with the object of obtaining an indication as to the extent of financial support which will be forthcoming. It appears to us that, despite the present pressure for Government economy, the great public advantage secured by the establishment of a fire-testing station under State auspices would justify the public expenditure involved. The cost of upkeep would be largely met by fees paid by those desiring to have an authoritative test and report.

CORROSION IN HOT-WATER TANKS

Sir,—I am pleased to say that at last I have been able to obtain some proofs in regard to the cause of rapid corrosion in hot-water tanks. In this connection I was able to obtain valuable information from the chief electrician of the Metropolitan Water Board, to whom I am indebted for the use of certain instruments in carrying out experiments which I think have ultimately solved the problem.

One of these experiments has proved that owing to the potential difference in the two metals, zinc and steel, a measurable current of electricity is generated through the water, which increases with the rise of temperature. This was proved by the use of a milli-voltmeter. Any particle of metal which might have come up through the intake pipe and which would rest on the bottom of the tank must consequently become oxidised very rapidly by this electrolytic action, and the greater the heat the more rapid would be the corrosion, owing to the increase in voltage as stated above.

This explains the reason for the increase in corroded tanks through the past four or five years, as before the advent of the high-pressure boiler these were usually heated by means of a kitchener, where the heat was less, and, what is more important, not continuous. The increase of electricity generated through the high temperature explains why corrosion does not take place in cold-water tanks, although even in this case the electricity is measurable.

A most convincing point in regard to this, however, is the fact that it was found that when the metal-to-metal joint is made at pipe fittings, no corrosion follows. The reason for this is that a metal-to-metal joint forms an effective connection for the current, whereas the joint, if made of red lead or hemp, is an insulator, and is not sufficient in itself to complete an electrical circuit. This explains why galvanised cylinders do not corrode, as owing to the screwed flanges, a metal-to-metal watertight joint can be made without the use of red lead or any other substance.

We now come to the remedy and this is quite a simple one. All that has to be done is to solder a piece of thin-gauge copper wire on to the tank and from thence on to the flow and return pipes, so that these are securely bonded. This will form an effective connection and prevent any electrolytic action taking place inside the tank. This has already been tried on a tank which had commenced to leak, and immediately afterwards the leak stopped. To protect the interests of the manufacturers, I hope that every builder and plumber will see the urgent necessity for so bonding every tank when fitted. This cannot take more than a minute or two and the cost is negligible.

Norman A. Dore,
General Manager,
Baldwins, Ltd.

Carpentry and Joinery.

Bricklaying.

Army Vocational Training Centre: Exhibits at the Aldershot Show.

NEW BUILDINGS IN LONDON

Bethnal Green.—HOUSING.—The B.C. are erecting 73 tenements at the Claredale estate. The architect is Mr. E. C. P. Monson, F.R.I.B.A., Finsbury-pavement House, 120, Moorgate, E.C.2, and the builders are Messrs. Speirs, Ltd., 53, Victoria-street, S.W.1.

Burnt Oak.—EXTENSIONS.—Factory extensions, including a new caretaker's cottage, are to be erected at the works in Deansbrooke-road, N.W., of Messrs. Boosey and Hawkes, Ltd., 295, Regent-street, W.1. The builders are Messrs. Buckingham and Sons, 22, Circus-road, N.W.8. The architects are Messrs. E. Howard and Partners, 3, St. James's-street, S.W.1.

Camberwell. — ADAPTATION. — The L.C.C. has placed a contract with Messrs. William Downs, Ltd., 12, Hampton-street, Walworth, S.E.17, for adaptation of 21-27, Peckham-road, for nurses' quarters and sundry works at St. Giles' Hospital.

Chelsea.—HOUSES.—We understand that Mr. F. C. Grimwade, 52, Bedford-row, W.C.1, has prepared plans for the development of the site of Catherine Lodge, Trafalgar-square, Chelsea, S.W.3.

Chingford.—SCHOOL.—A contract has been placed with Messrs. Hallwoods, Ltd., Hennett-street, Hyde, Manchester, for the erection of a new Roman Catholic school at The Green, Station-road, E.4. The priest is the Rev. J. E. Howell, 1, King's-road, Chingford, E.4.

Chiswick.—GARAGE.—A new garage is to be erected at the works of the Chiswick Polish Co., Ltd., Burlington-lane, W.4. The architect is Mr. A. Alban H. Scott, F.R.I.B.A., 30, Bouverie-street, E.C.4, and the builders are Messrs. Patman and Fotheringham, Ltd., 15, Park-street, Islington, N.1.

Coulsdon.—SHOWROOMS.—The Croydon Gas Co., Katherine-street, Croydon, have under consideration plans for a block of shops, showrooms and depot premises. The architect is Mr. A. Douglas Robinson, 104, Queen Victoria-street, E.C.4.

Croydon.—EXTENSIONS. — For alterations and extensions to 74, North End, Messrs. Silcock and Son, 169, Cannon Street-road, E.1, have secured the contract. Mr. J. Cannell, F.R.I.B.A., 52, Holborn Viaduct, E.C., is the architect. This work will not commence for some time.

Croydon.—BANK.—We understand that new bank premises are to be erected at 960, Brighton-road, for the Westminster Bank, Ltd.

Dagenham. — OFFICE. — H.M.O.W. have placed a contract with Messrs. A. Roberts and Co., Ltd., 74, Earl's Court-road, Kensington, W.8, for the erection of the post office.

Deptford.—SHOWROOMS.—Messrs. Montague Burton, Ltd., are to erect a block of showrooms and shops on the site of 5-9, Deptford High-street, S.E. The work will be put in hand shortly under the supervision of the company's architects' department at Hunslet-road, Leeds.

East Ham.—ADDITIONS.—Messrs. Marshall and Partners, architects, 3, Arundel-street, Strand, W.C.2, have submitted plans to the local council for additions to St. Michael's Roman Catholic school, in Arthur-road and Howard-road. No building contracts have yet been placed.

East Wickham.—CHURCH.—Mr. T. F. Ford, A.R.I.B.A., 12, City-road, E.C.1, is the architect, and Messrs. Chapman, Lowry and Puttick, Ltd., Station-road, Haslemere, the builders, for a new church.

Edgware-road.—ALTERATIONS.—Are being carried out at No. 199, for Messrs. Robertsons (London), Ltd. Messrs. Turner, Lord and Co., 20, Mount-street, W.1, have prepared the plans, while the building work has been placed with Messrs. Higgs and Son, 25, Upper Park-place, N.W.1.

Edgware-road.—REINSTATEMENT.—The contract for the reinstatement of Messrs. Gardiner's premises at the corner of Edgware-road and Chapel-street, extensively damaged by fire, has been placed with Mr. Charles R. Price, of Bishopsgate. The architects are Messrs. Shepherd and Thomerson, of 80, Queen's-road, Bayswater, W.2.

Enfield.—SCHOOL.—For the erection of Suffolks School, the Education Committee are inviting tenders.

Finchley.—BUILDING.—Mr. P. T. Harrison, surveyor to the Finchley Council, has prepared a scheme for new club-room and training quarters at Summers-lane, N.12, for the Finchley Football Club. No building contract has yet been placed.

Fulham.—EXTENSIONS.—The B.C. has approved an application by Mr. W. Doddington, 262, Earl's Court-road, for extension to 1 and 3, Stephendale-road.

Grosvenor-square.—BUILDING.—The L.C.C. has approved the application of Messrs. Johnson's Reinforced Concrete Engineering Co., Ltd., on behalf of Mr. C. E. Peczenik, for the erection of a building at 19, 20 and 21, Grosvenor-square, Westminster, next to North Audley-street.

Hampstead.—FLATS.—A block of high-class flats, to be known as Bracknell Court, is to be erected on a site in Frognall-lane, N.W. The plans have been prepared by Messrs. A. and D. Ospalak, chartered architects, 25. Victoria-street, S.W.1.

Hanger Hill.—ESTATE.—Lay-out plans have been prepared for the development of part 4 of the Hanger Hill estate, W.5, which involves the construction of 19 new roads and the erection of a number of houses. The architects are Messrs. Welch, Cachemaille-Day and Lander, 7, New-square, Lincoln's Inn, W.C., acting on behalf of Messrs. Haymills, Ltd., Builders, 1, Grand-parade, Wembley Park.

Harp-lane. — RESTORATION. — The contract for the restoration of the Bakers' Hall, Harp-lane, E.C.3, for the Bakers Company, has been placed with Messrs. G. E. Wallis and Sons, Ltd., Medway House, Old Cavendish-street, W.1. The plans have been prepared by Mr. Sydney Tatchell, F.R.I.B.A., 32, Strand, W.C.2, in conjunction with Mr. W. Newcome Wright, F.S.I., 164, Bishopsgate, E.C.3, architect to the company.

Hounslow.—GARAGES.—Mr. H. B. Longley, 93, High-street, Epsom, proposes to carry out alterations at 727, London-road, and to erect a range of 20 lock-up garages.

Kentish Town.—FLATS.—Plans have been prepared for the St. Pancras House Improvement Society, Ltd., 96, Seymour-street, N.W.1, for the erection of ten blocks of working-class flats on a site between Wilkin-street and Warden-road, N.W. The cost will be approximately £100,000. The architect is Mr Ian B. M. Hamilton, F.R.I.B.A., 15, Old Buildings, Lincoln's Inn, W.C. No contracts have been placed yet.

Lincoln's Inn Fields.—ALTERATIONS.—The Equity and Law Life Assurance Society are to carry out alterations to their head offices at No. 18. The contract has been placed with Messrs. Foster and Dicksee, Ltd., 33, Davies-street, W.1. The plans have been prepared by Messrs. Bishop and Etherington-Smith, 30, Duke-street, S.W.1.

Mile End.—EXTENSIONS.—The L.C.C. recommend £21,836 in respect of the extension of the nurses' home at Mile End Hospital, Bancroft-road, E.1.

North Kensington. — ADDITIONS. — The works of Messrs. Newnes and Pearson Printing Co., Ltd., 2, Exmoor-street, W.10, are to be altered and extended. Mr. A. Alban H. Scott, F.R.I.B.A., 30, Bouverie-street, E.C.4, is the architect, and Messrs. Foster and Dicksee, Ltd., 33, Davies-street, W.1, the contractors.

Regent's Park.—REBUILDING.—In connection with an important scheme the L.M.S.R. have decided to carry out the rebuilding of the premises at Park Village-east, N.W., occupied by the Regent's Park Riding School, Ltd. The plans have been prepared by the company's staff, Euston-station, N.W.1.

St. Marylebone.—BUILDING.—The L.C.C. has sanctioned the application of Messrs. Johnson's Reinforced Concrete Engineering Co., Ltd., on behalf of Mr. C. E. Peczenik, for the erection of a building at 101-113 (odd), Hallam-street, N.W.

Shaftesbury-avenue.—REDECORATION.—The Shaftesbury Theatre is to be redecorated by Messrs. Hall and Dixon, Ltd., 19, Garrick-street, W.C.2. The work is under the supervision of Messrs. T. P. Bennett and Son, 41, Bedford-row, W.C.1.

Surbiton.—HOUSE.—The tender of Messrs. W. H. Gaze and Sons, Ltd., High-street, Kingston-on-Thames, has been accepted for the reconstruction after fire of the club house of the Surbiton Golf Club. The plans have been prepared by Mr. J. D. Hossack, A.R.I.B.A., 35, Maddox-street, W.1.

Uxbridge.—HOUSES.—The U.D.C. has recommended the estimate of the Unit Constructional Co., Ltd., Adelphi Terrace House, 1, Robert-street, W.C.2, for the erection of 60 houses, including roads and sewers.

Walthamstow.—HOUSES.—The T.C. are inviting tenders for the erection of 92 houses on the Kimberley-road site, and 136 houses on the Essex Hall site. The Borough Engineer and Surveyor has prepared the plans.

Walthamstow.—SHOPS.—The Evelyn Property Co., Ltd., 12, Princes-street, Cavendish-square, W.1, are to erect a large block of premises in the High-street, E. The contract has been placed with Messrs. Henry Kent, Ltd., 31, Beacon-road, Lee Green, S.E., whilst the plans have been prepared by Mr. G. Taylor, A.R.I.B.A., 5, Manchester-square, W.1.

Watford.—HALL.—The estimate of Mr. H. Brown, Whippendell-road, Watford, has been accepted by the Croxley Green Church Council for the erection of a hall. The architect is Mr. A. Bryett, A.R.I.B.A., 30, Bury-street, St. James, S.W.1.

NEW CINEMAS

Barnard Castle.—Work is proceeding on extensive alterations to the Scala Cinema. The contractors are Messrs. Ridsdale Brothers, 1, Cecil-road, Barnard Castle, and the plans have been prepared by Messrs. Wetherell, Dent and Pickersgill, A.R.I.B.A., Barnard Castle.

Carlisle.—Alterations are proposed to the "Palace Theatre." The work will be carried out to plans by Mr. C. W. Davenport, Ingle Nook, Stockton Heath, Warrington, Surveyor to the Macnaghten Vaudeville Circuit. The scheme has been approved.

Glasgow.—Permission has been granted by the Dean of Guild Court for the erection of a new cinema in the Possilpark district of the city, at the junction of Balmore-road and Hawthorn-street. The construction will begin in September, and when completed the building will accommodate 1,600 persons. Messrs. J. McKissach and Son, 68, West Regent-street, Glasgow, are the architects.

Nottingham.—The building contract for "The Aspley" cinema, to be erected at the junction of Bar-lane and Nuthall-road, to seat 1,294 persons (plans by Messrs. Satchwell and Roberts, New-street, Birmingham), has been placed with Mr. J. Cawley, Leen Side, Nottingham.

Reading.—A cinema, to seat 2,000, is to be built in King's-road, Reading, to be called the "Regent." The architect is Mr. F. G. Sainsbury, L.R.I.B.A., 15, Friar-street, Reading, and 22, Bedford-row, W.C.1.

Shipley.—Plans have been passed by the U.D.C. for the erection of a cinema and variety theatre in Leeds-road. Mr. G. Whitaker presented the plans.

Sidcup.—Mr. T. J. Robins, proprietor of the King's Hall, has decided to convert his building into a cinema, seating 1,600 persons. There will be a café. The plans have been prepared by Mr. Robert Cromie, F.R.I.B.A., 35, Baker-street, W.1.

Staines.—A contract has been placed with Messrs. Hudson Bros. (Builders), Ltd., 207, St. John's-hill, S.E.11, for extensive alterations, including new façade, stage and dressing-rooms, etc., at the Empire Cinema. The architect is Mr. George Coles, F.R.I.B.A., 40, Craven-street, Strand, W.C.

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 1st FEBRUARY, 1932.

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.]

	Masons.	Bricklayers.	Carpenters Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Aberdare	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Accrington	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Aldershot	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Alfreton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Alnwick	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Altrincham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Ashford (Kent)	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Ashington	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Ashton-under-Lyne	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Aylsham	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Banbury	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Barnsley	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Barnstaple	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Barrow-in-Furness	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Barry	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Basingstoke	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Bath	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bedford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Berwick	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Bexhill	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11
Birkenhead	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7½	1/2½
Birmingham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bishop Auckland	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Blackburn	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Blackpool	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bognor Regis	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11
Bolton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bournemouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bradford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bradford-on-Avon	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/1½	11
Braintree	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Brentwood	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Bridgwater	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Bridlington	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Brighton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bristol	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bromsgrove	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Bromyard	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Bungay	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	10½
Burnley	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Burton-on-Trent	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bury	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bury St. Edmunds	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11
Buxton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Cambridge	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Canterbury	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Cardiff	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Carlisle	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Chatham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Chelmsford	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Cheltenham	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Chester	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Chesterfield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Chorley	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Cirencester	1/3	1/3	1/3	1/3	1/3	1/3	1/2	11
Clacton	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11
Colchester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Coventry	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Cranbrook	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	10½
Crewe	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Cromer	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Darlington	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Deal	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Denbigh	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Derby	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Devizes	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/1½	11
Dewsbury	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Doncaster	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Dorchester	1/3	1/3	1/3	1/3	1/3	1/3	1/2	11½
Dorking	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Dovercourt	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Driffield	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Droitwich	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Dudley	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Durham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Eastbourne	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
E.Glam.(Mon.Val.)	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Ely	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Exeter	1/5	1/5	1/5	1/5	1/5	1/5	1/4	1/0½
Exmouth	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Fakenham	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Felixstowe	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Folkestone	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Frome	1/3	1/3	1/3	1/3	1/3	1/3	1/2	11½
Glossop	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Gloucester	1/5	1/5	1/5	1/5	1/5	1/5	1/4	1/0½
Godalming	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Goole	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Gosport	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Grantham	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Gt. Yarmouth	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Grimsby	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Guildford	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Halifax	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Harpenden	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Harrogate	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Hartlepools	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Harwich	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Hastings	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Hatfield	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hednesford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hereford	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Herne Bay	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Hertford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hitchin	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Hoddesdon	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Holt	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	10½
Huddersfield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Hull	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Hunstanton	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Huntingdon	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Isle of Wight	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Ipswich	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Keighley	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Kettering	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Kidderminster	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Kings Lynn	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Lancaster	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½

	Masons.	Bricklayers.	Carpenters Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Leamington Spa	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Leeds	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Leicester	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Leighton Buzzard	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Lichfield	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Lincoln	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Littlehampton	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11
Liverpool	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7½	1/2½
Llandudno	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Llanelly	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
London—								
12 m. radius	1/7½	1/7½	1/7½	*		1/7½	1/7½	1/6½
12-15 m. radius	1/7	1/7	1/7	*		1/7	1/7	1/6
Loughborough	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
Lowestoft	1/3½	1/3½	1/3½	1/3½		1/3½	1/3½	11½
Luton	1/4½	1/4½	1/4½	1/4½		1/4½	1/4½	1/0½
Macclesfield	1/5½	1/5½	1/5½	1/5½		1/5½	1/5½	1/1½
Maidstone	1/4	1/4	1/4	1/4		1/4	1/4	1/-
Malvern	1/4½	1/4½	1/4½	1/4½		1/4½	1/4½	1/0½
Manchester	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
Mansfield	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
Margate	1/3½	1/3½	1/3½	1/3½		1/3½	1/3½	11½
Market Harborough	1/4½	1/4½	1/4½	1/4½		1/4½	1/4½	1/0½
Matlock	1/4½	1/4½	1/4½	1/4½		1/4½	1/4½	1/0½
Melton Constable	1/1½	1/1½	1/1½	1/1½		1/1½	1/1½	10½
Melton Mowbray	1/5	1/5	1/5	1/5		1/5	1/5	1/0½
Merthyr Tydfil	1/5½	1/5½	1/5½	1/5½		1/5½	1/5½	1/1½
Middlesbrough	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
Newark	1/5	1/5	1/5	1/5		1/5	1/5	1/0½
Newbury	1/3	1/3	1/3	1/3		1/3	1/3	11½
Newcastle-on-Tyne	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
Newcastle-u-Lyme	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
New Forest	1/3	1/3	1/3	1/3		1/3	1/3	11½
Newmarket	1/3½	1/3½	1/3½	1/3½		1/3½	1/3½	11½
Newport, Mon.	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
Northampton	1/5½	1/5½	1/5½	1/5½		1/5½	1/5½	1/1½
Norwich	1/5	1/5	1/5	1/5		1/5	1/5	1/0½
Nottingham	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
Nuneaton	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
Oakham	1/4½	1/4½	1/4½	1/4½		1/4½	1/4½	1/0½
Oldham	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
Oxford	1/5	1/5	1/5	1/5		1/5	1/5	1/0½
Paignton	1/5	1/5	1/5	1/5		1/5	1/5	1/0½
Peterborough	1/5	1/5	1/5	1/5		1/5	1/5	1/0½
Plymouth	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
Pontypridd	1/5½	1/5½	1/5½	1/5½		1/5½	1/5½	1/1½
Portsmouth	1/4½	1/4½	1/4½	1/4½		1/4½	1/4½	1/0½
Preston	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
Ramsgate	1/3½	1/3½	1/3½	1/3½		1/3½	1/3½	11½
Reading	1/5	1/5	1/5	1/5		1/5	1/5	1/0½
Redcar	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
Redditch	1/5	1/5	1/5	1/5		1/5	1/5	1/0½
Reigate	1/4	1/4	1/4	1/4		1/4	1/4	1/-
Retford	1/4½	1/4½	1/4½	1/4½		1/4½	1/4½	1/0½
Ripon	1/4½	1/4½	1/4½	1/4½		1/4½	1/4½	1/0½
Rochdale	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
Rochester	1/4	1/4	1/4	1/4		1/4	1/4	1/-
Rugby	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
Saffron Walden	1/2	1/2	1/2	1/2		1/2	1/2	10½
St. Albans	1/5	1/5	1/5	1/5		1/5	1/5	1/0½
St. Helens	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
Sawbridgeworth	1/4	1/4	1/4	1/4		1/4	1/4	1/0
Saxmundham	1/2	1/2	1/2	1/2		1/2	1/2	10½
Scarborough	1/5½	1/5½	1/5½	1/5½		1/5½	1 5½	1/1½
Sevenoaks	1/4	1/4	1/4	1/4		1/4	1,4	1/-
Sheffield	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
Shrewsbury	1/5	1/5	1/5	1/5		1/5	1/5	1/0½
Sittingbourne	1/2½	1/2½	1/2½	1/2½		1/2½	1/2½	11
Southampton	1/5	1/5	1/5	1/5		1/5	1/5	1/0½
Southend-on-Sea	1/5	1/5	1/5	1/5		1/5	1/5	1/0½
Southport	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
South Shields	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
Stevenage	1/4	1/4	1/4	1/4		1/4	1/4	1/-
Stockport	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
Stockton-on-Tees	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
Stoke-on-Trent	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
Stourbridge	1/5½	1/5½	1/5½	1/5½		1/5½	1/5½	1/0½
Stourport	1/5	1/5	1/5	1/5		1/5	1/5	1/0½
Stowmarket	1/2½	1/2½	1/2½	1/2½		1/2½	1/2½	11
Stratford-on-Avon	1/4½	1/4½	1/4½	1/4½		1/4½	1/4½	1/0½
Stroud	1/4	1/4	1/4	1/4		1/4	1/4	1/-
Sunderland	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
Swaffham	1/1½	1/1½	1/1½	1/1½		1/1½	1/1½	10½
Swansea	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
Swindon	1/4½	1/4½	1/4½	1/4½		1/4½	1/4½	1/0½
Tamworth	1/5½	1/5½	1/5½	1/5½		1/5½	1/5½	1/1½
Taunton	1/4	1/4	1/4	1/4		1/4	1/4	1/-
Thetford	1/2½	1/2½	1/2½	1/2½		1/2½	1/2½	11
Torquay	1/5½	1/5½	1/5½	1/5½		1/5½	1/5½	1/1½
Totnes	1/4	1/4	1/4	1/4		1/4	1/4	1/-
Towbridge	1/3	1/3	1/3	1/3		1/3	1/2	11½
Tunbridge Wells	1/4	1/4	1/4	1/4		1/4	1/4	1/-
Uttoxeter	1/4	1/4	1/4	1/4		1/4	1/4	1/-
Wakefield	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
Walsall	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
Walsden	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
Warminster	1/2½	1/2½	1/2½	1/2½		1/2½	1/2½	11
Warrington	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
Warwick	1/5	1/5	1/5	1/5		1/5	1/5	1/0½
Wells (Norfolk)	1/1½	1/1½	1/1½	1/1½		1/1½	1/1½	10½
Welwyn Gar. City	1/5	1/5	1/5	1/5		1/5	1/5	1/0½
West Bromwich	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
Weston-super-Mare	1/5	1/5	1/5	1/5		1/5	1/5	1/0½
Weymouth	1/3	1/3	1/3	1/3		1/3	1/2	11
Whitby	1/5	1/5	1/5	1/5		1/5	1/5	1/0½
Wigan	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
Winchester	1/3½	1/3½	1/3½	1/3½		1/3½	1/3½	11½
Windsor	1/4½	1/4½	1/4½	1/4½		1/4½	1/4½	1/0½
Wisbech	1/2½	1/2½	1/2½	1/2½		1/2½	1/2½	11
Wolverhampton	1/6	1/6	1/6	1/6		1/6	1/6	1/1½
Woodbridge	1/2½	1/2½	1/2½	1/2½		1/2½	1/2½	11
Worcester	1/5	1/5	1/5	1/5		1/5	1/5	1/0½
Worksop	1/4½	1/4½	1/4½	1/4½		1/4½	1/4½	1/0½
Worthing	1/3	1/3	1/3	1/3		1/3	1/3	11½
Wrexham	1/5½	1/5½	1/5½	1/5½		1/5½	1/5½	1/1½
Wycombe	1/4½	1/4½	1/4½	1/4½		1/4½	1/4½	1/0½
Wymondham	1/2	1/2	1/2	1/2		1/2	1/2	10½
York	1/6	1/6	1/6	1/6		1/6	1/6	1/1½

*The rate recognised by the National Association of Plasterers, Granolithic and Cement Workers, as and from the 1st June, 1932, is 1/9 per hour.

For Building Trade wages in Scotland, see page 115.

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this *List*, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender, that a fair wages clause shall be observed, that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given is the latest date when the tender, or the names of those willing to submit tenders, may be sent in, the name and address at the end is the person from whom or place where quantities, forms of tender, etc., may be obtained.

Following is a list of abbreviations:—Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor, S.; Engineer, E.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

JULY 18.

Antrim.—Reconstruction.—Of hay shed at Springfarm House, County Antrim Mental Hospital, for Antrim Mental Hospital. F. D. Brown, 93, Ann-st., Belfast. Dep. £1.

Barnsley.—School.—New elementary school at Scholes, for West Riding E.C. Education Officer, County Hall, Wakefield.

Beddington.—Alterations.—At Isolation Hospital, Beddington-corner, Mitcham Junction, for Wandle Valley Joint Hospital Board. E. W. Gunner, clerk. Dep. 10s. 6d.

Billinge, near Wigan.—Extensions.—And alterations to nurses' hostel. Town Clerk, Library-st., Wigan. Dep. £3 3s.

Chester.—Plastering.—Also other incidental bricklayers' and joiners' work at City Hospital, Hoole-lane, for T.C. Charles Greenwood, City E. and S.

Docking.—Houses.—12 non-parlour, at Burnham Sutton, for R.D.C. H. East, Housing Architect to Council, Fairlight, Poplar-av., Heacham, King's Lynn. Dep. £1 1s.

Parkhill.—Alterations.—Addition to R.U.C. Barracks, Co. Armagh, for Ministry of Finance, Government of Northern Ireland. Secretary, Ministry of Finance, 13, Ormeau-av., Belfast.

Halifax.—Lairage.—Reinforced concrete "tie-up" lairage, at abattoir, for C.B. D. T. Lloyd-Jones, B.E., Crossley-st. Dep £1 1s.

Huddersfield.—Conversion.—Water closet fittings required for conversion scheme, for C.B. W.C. Conversions Officer, 18, Ramsden-st.

Kidderminster.—Houses.—100 on Broadwaters Estate, for T.C. J. Hawcroft, B.E. and S., 110, Mill-st. Dep. £2 2s.

King's Lynn.—Rooms.—Additional rooms to St. James's Senior Girls' School, Blackfriars'-rd., for Elementary E.C. Allfatt and Courtney, architects, Tuesday Market-place. Dep. £2 2s.

Leadgate.—Houses.—33 A2 type dwelling-houses on Front-st. site, for U.D.C. T. J. M. Ripley, S. Dep. £2 2s.

Littleport.—Alterations.—Also improvements at Council schools and New Road Girls' Council school, Chatteris, for E.C. of Isle of Ely C.C. R. D. Robson, school architect, County Hall, March.

Liverpool.—Painting.—At Rivington Works, for Corporation Water Committee. Water Engineer, 85, Dale-st.

Pudsey.—Painting.—Cleaning, painting, and renovating portion of interior of school buildings, for Governors. H. Flather, Clerk to Governors, Education Offices.

Romford.—Workshop.—Engineer's workshop at Isolation Hospital, Rush Green, for Romford Joint Hospital Board. W. Evans, architect, Western-chams., South-st.

Scholes.—School.—Elementary school at Scholes, near Leeds, for West Riding C.C. Education Architect, Wakefield.

Sutton.—Heating.—Alterations and extensions to heating apparatus at municipal offices and fire station, High-street, Sutton, for Sutton and Cheam U.D.C. Wm. Hedley Grieves, S. Dep. £1 1s.

Sutton.—Redecoration.—Also painting internally at Public Hall, Hill-rd., for Sutton and Cheam U.D.C. Wm. Hedley Grieves, S. Dep. £1 1s.

Wallington (Surrey).—Building.—Erection of Woodfield pumping station, for U.D.C. Edward Sandeman, consulting engineer, 15, Victoria-st., Westminster, S.W.1. Dep. £3 3s.

Winchester.—Demolition.—Pulling down of 4 cottages, 91, 92, 93 and 94, Colebrook-st., for T.C. City E.

JULY 19.

Bournemouth.—Wards.—Additions to casual wards at Fairmile House, Christchurch, for C.B. W. J. Dacombe, architect, Lloyds Bank-chambs., Boscombe.

Brentford.—Classrooms.—At Lionel-rd. school, Brentford, for Brentford and Chiswick U.D.C. E. Willis, E. and S. Dep. £2 2s.

Chingford.—Centre.—Combined treatment centre, for Essex C.C. J. Stuart, County Architect, County Hall, Chelmsford. Dep. £1 1s.

Coalville.—Houses.—60 non-parlour type with 2 and 3 bedrooms on sites situate at Whitwick and Ellistown, for U.D.C. McCarthy, Collings & Co., architects, Central-chams., Coalville, or Goddard & Wain, architects, Station-chams., Coalville. Dep. £3 3s.

Felling.—Houses.—14 at Pelaw, for U.D.C. C. W. Hall, architect, Council-bldgs. Dep. £1 1s.

Hull.—Building.—Buildings for two electricity sub-stations, for T.C. J. N. Waite, City Electrical Engineer, Electricity Works, Sculcoates-lane. Dep. £1 each.

Mangotsfield.—Conveniences.—At Page-rd., Staple Hill, for U.D.C. F. Wallace, Clerk. Dep. £2 2s.

Middleton Cheney.—Houses.—Two pairs of semi-detached at Upper Boddington, for R.D.C. C. E. Barnes, clerk, Brackley. Dep. £1 1s.

Oldbury.—Houses.—90 non-parlour 3-bedroom type at Mushroom Hall estate, Langley, for U.D.C. W. Greenwood, E. and S.

Peterborough.—Telephone Exchange.—For H.M.O.W. Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

St. Andrews.—Houses.—40 three-apartment houses and 6 four-apartment houses at Kinnessburn-rd., for T.C. Walker & Pride, architects, Church-sq. Dep. £1 1s.

Sheffield.—Houses.—288 non-parlour type on Shiregreen estate, part 3 (building scheme No. 6), for T.C. W. Geo. Davies, F.R.I.B.A., City Architect. Dep. £2.

Strood.—Internal Decorations, for H.M.O.W. Contracts Branch, H.M.O.W., King Charles-st., S.W.1. Dep. £1 1s.

Sudbury.—Pavilion.—Sports pavilion on secondary schools playing field, Acton-lane, for West Suffolk E.C. A. Ainsworth Hunt, County Architect, 51a, Abbeygate-st., Bury St. Edmunds.

Watford.—Housing.—19 houses in Trowley-rise, Abbot's Langley, for R.D.C. S., 25, King-st. Dep. £2.

Wood Green.—Repairs.—To Council schools, for U.D.C. R. H. Matthews, E. and S. Dep. £1 1s.

JULY 20.

Birmingham.—Building.—3 pavilions and 1 isolation block at infectious diseases hospital, Yardley Green-rd., Little Bromwich, for T.C. W. Norman Twist, F.R.I.B.A., Sun-bldgs., Bennett's-hill. Dep. £2 2s.

Bristol.—Building.—Branch library at Wick-rd., Brislington, for T.C. Bernard & Son, quantity surveyors, 26, Orchard-st. Dep. £2 2s.

Dublin.—Houses.—273 three-roomed and 47 four-roomed on Cabra (Beggsboro') extension housing area (section No. 2), for Corporation. Housing Architect, Exchange Buildings, Lord Edward-st. Dep. £5 5s.

Leigh (Lancs).—Houses.—Town Clerk, Town Hall. Dep. £2 2s.

Liverpool.—Houses.—30 non-parlour type houses, Dovecot estate, portion No. 2; 44 non-parlour type houses, Dovecot estate, portion No. 5; 9 non-parlour type houses, Walton-Clubmoor estate, N.E. portion, for T.C. Director of Housing, Municipal Annexe, Dale-st., Liverpool. Dep. £1 1s. each.

Manchester.—Extension.—To meat market at city abattoirs, for T.C. City Architect. Dep. £1 1s.

Newport (Mon.).—Painting.—Painting and decorating 114 houses, Cromwell-rd. estate; painting and decorating 66 houses, Somerton estate, and demolition of Maindee Park house, for T.C. Borough Architect. Dep. £1 1s. each.

Portadown.—Building.—Branch office, for Ulster Bank, Ltd. Blackwood & Jury, architects, 37, Donegall-pl., Belfast. Dep. £3 3s.

Stafford.—Houses.—81 non-parlour type on Stone-rd. housing estate, for T.C. W. Plant, B.E. Dep. £1 1s.

Stalybridge.—Painting.—106 houses, Hague site; 107 houses, Hague site; 42 houses, Buckton Vale site; and 6 houses, Greystreet, for T.C. F. H. Worsley, T.C.

Wem.—Houses.—22 non-parlour type, for R.D.C. G. H. Hollahd, S. Dep. £2 2s.

Westminster.—Internal cleaning, for H.M.O.W. Contracts Branch, H.M.O.W., King Charles-st., S.W.1. Dep. £1 1s.

JULY 21.

Billesdon.—Houses.—Two non-parlour type, on St. Thomas'-rd., Great Glen, near Leicester, for R.D.C. W. B. Moore & Son, F. & A.R.I.B.A., Barclays Bank-bldgs., High-st., Leicester.

Cork.—Houses.—24 at Evergreen site, for Irish Sailors and Soldiers Land Trust. W. J. Browne, F.R.I.B.A., F.S.I., architect, 51, Upper Mount-st., Dublin. Dep. £5 5s.

Farnborough.—Painting.—(a) External wood and iron work of 47 houses in High-st. and Morris-rd., South Farnborough, and (b) repairs to roofs of 20 houses in Marrowbrook-lane, for U.D.C. Sanitary Inspector.

Lancaster.—Houses.—100 houses of A.3 type on Ryelands housing estate, for T.C. F. Hill, B.S. Dep. £1 1s.

Leyton.—Centre.—Health clinic and infant welfare centre in Leyton Green-rd., E.10, for T.C. B.E. and S. Dep. £10.

London.—Building.—Storage accommodation for hotels and refreshment rooms department at Paddington Station, for G.W.R. Engineer, Paddington Station. Dep. £2 2s.

Newcastle-upon-Tyne.—Houses.—198 on Ferguson's-lane housing estate, for T.C. Housing Architect, 18, Cloth-market. Dep. £2 2s.

Tregaron.—Painting.—Also redecorating of Bwlchygwynt C.M. Chapel. E. Caron Evans, secretary, Penddol House, Tregaron.

Whickham.—Houses.—80 on Swalwell No. 3 site, situated south of Clavering-rd., for U.D.C. Thos. Fenbow, S. Dep. £20.

York.—Installation.—Of heating and water services at York District Manager's office, Clifton, for H.M.O.W. Contracts Branch, H.M. Office of Works, King Charles-st., London, S.W.1. Dep. £1 1s.

JULY 22.

Belfast.—Cottages.—4 on Stormont estate, for Government of Northern Ireland. Secretary, Ministry of Finance, 13, Ormeau-av., Belfast. Dep. £1.

Bootle.—Building.—Extensions to nurses' quarters and demolition of old pavilion and construction of a new 12-bed cubicle block at infectious diseases hospital, for C.B. B.E. and S. Dep. £1 1s.

Bournemouth.—Additions.—Alterations and additions to Winton Library, Wimborne-rd., for C.B. Dolamore, B.E. Dep. £3 3s.

Cambridge.—Head Post Office.—For H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

***Enfield.**—School.—For Enfield E.C. Education Offices, Gentleman's-row. Dep. £3 3s.

Horsforth.—Houses.—20 sculleryless type, on Cragg Hill housing site, for U.D.C. Jas. E. Aldersley, architect. Dep. £2 2s.

Inverness.—Houses.—17 blocks of semi-detached four-apartment houses at Dalneigh site, for T.C. Wm. Smith, architect, High-st.

Kingston-upon-Hull.—Heating.—Installation of heating plant at West Hull Baths, Albert-av., for T.C. H. Hamer, City E. Dep. £3 3s.

Kingston-upon-Hull.—Paving.—Mosaic and terrazzo paving, terrazzo partitions with teak framing and doors in connection with West Hull baths, Albert-av., for T.C. Herbert Hamer, City E. Dep. £3 3s.

London.—Heating.—Installation of Plenum and air extraction plant, steam and hot water heating apparatus, high pressure steam, domestic hot water supply, and gas services, at Hackney Hospital, High-st., Homerton, E.9, for L.C.C. Chief Engineer, Old County Hall, Spring-gardens, S.W.1. Dep. £1.

***Wheatley (Wigan.)**—Houses.—For C.B. of Wigan. Town Clerk, Municipal Buildings, Library-st. Dep. £3 3s.

JULY 23.

Aberystwyth.—House.—House, for J. B. Dalton. G. T. Bassett, A.R.I.B.A., architect and surveyor, Aberystwyth.

Burntisland.—Fencing.—Road construction, laying sewers, water and gas pipes, fitting up street lamps and erecting fences for third development of Rossend housing scheme of 36 houses, for T.C. J. A. Waddell, B.S. Dep. £1.

Cleckheaton.—Repainting.—Exterior of Providence-place Congregational Church, Cleckheaton, and outbuildings. H. Bottomley, secretary, 4, Heaton-av.

Durham.—Houses.—15 at Pity Me, Framwellgate Moor, for R.D.C. J. N. Adams, architect and surveyor. Dep. £1 1s.

Exeter.—Alterations.—At Felixwell House, St. Thomas Public Assistance Institution for administrative offices, for Devon C.C. Public Assistance Department, St. Thomas Institution, Exeter.

Newtownbutler.—School.—Public elementary school at Newtownbutler, Co. Fermanagh, for Very Revd. Thomas O'Doherty, P.P. J. Donnelly, M.R.I.A.I., architect, Enniskillen. Dep. £2 2s.

Welwyn Garden City.—Housing.—57 non-parlour type houses and 8 flats, for U.D.C. G. R. Barnsley, A.R.I.B.A., 7, Grosvenor-st., W.1. Dep. £2 2s.

JULY 25.

Beddington and Wallington.—Painting.—External painting at 118 houses on Bute-rd. housing site, for U.D.C. S. F. R. Carter, E. and S. Dep. £2 2s.

Cockett, Swansea.—Junior school and lodge. Director of Education, Dynevor-pl., Swansea. Dep. £4.

Criccieth.—Houses.—8, for U.D.C. J. Egbert Griffiths, L.R.I.B.A., 1, Bank-place, Portmadoc.

Ellesmere Port.—Houses.—100 on Grange Farm estate, for U.D.C. C. D. Dodd, Acting Clerk.

***Harmer-st., Gravesend.**—Extension.—To electricity offices, for Borough of Gravesend. Sealed tenders endorsed "Extension to the electricity offices." Clerk, 4, Woodville-terr., Gravesend.

London.—Fencing.—5,000 ft. run of framed oak fencing, with concrete posts and concrete base wall, and contingent works at site for burial ground, Milespit Hill and Dole-st., Mill Hill, Hendon, for Paddington B.C. B.E. Dep. £1 1s.

Mansfield Woodhouse.—Houses.—12 pairs of non-parlour type on Siant-lane site, for U.D.C. Lawrence Walker, S. Dep. £2 2s.

Wood Green.—Fencing.—335 feet of 9 ft. high corrugated steel sheet fencing, with gates, posts and stays complete, for U.D.C. R. H. Matthews, E. Dep. £1 1s.

JULY 26.

***Chapel-lane, Appleton.**—Houses.—For R.D.C. of Runcorn. Tenders endorsed "Appleton Housing Scheme," to Clerk, 69 High-st., Runcorn. Dep. £2 2s.

Great Crosby.—Houses.—Twenty-six off Derwent-rd., for U.D.C. Joseph A. Wright, S. Dep. £1 1s.

***Havelock-rd., Southall.**—Alterations and extensions to mortuary, for Southall-Norwood U.D.C., Town Hall. Dep. £2 2s.

New Milton, Hants.—Erection of Telephone Exchange and P.O., for H.M.O.W. Contracts Branch, King Charles-st, S.W.1. Dep. £1 1s.

JULY 27.

***Bolton.**—Installation.—Electrical installation: (1) sessions hall and police building; (2) library, museum and art gallery; (3) town hall, for C.B. Bradshaw, Gass and Hope, F.F.R.I.B.A., chartered architects 19, Silverwell-st. Dep. £5.

Boston.—Painting.—Inside painting at Park schools and at Tower-rd schools, for E.C. B.S.

Easington.—Painting.—Of 103 houses at Marion Colliery, for R.D.C. C. W. Clarke, Council Offices, Easington.

Herne Bay.—Houses.—31 non-parlour on Claremont-st., for U.D.C. R. J. Wormleighton, architect and surveyor. Dep. £1 1s.

Holinwood. — Completion of new roof, for H.M.O.W. Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

Kimberley-rd., Walthamstow. — Houses. — For Borough of Walthamstow. Borough Engineer and Surveyor, Town Hall. Dep. £1 1s.

Stepney, E. — Dwellings contract No. 350, for Metropolitan Borough Surveyor, Municipal Offices, Raine-st., E. Dep. £3 (Bank of England notes).

Wednesbury. — Houses. — 54 non-parlour type houses on Moxley site, for T.C. A. Booth, L.R.I.B.A., B.E. and S. Dep. £2 2s.

JULY 28.

Aberdare.—Pavilion.—New ward pavilion and connecting corridor, etc., at Vedwhir Smallpox Hospital, for U.D.C. S. Dep. £5.

Altofts.—House.—Farm House at Altofts, near Normanton. Christopher Clark, The Hermitage, Thornton Watlass, Ripon.

Down.—Alterations.—Alterations and additions to premises of Portavogie (2) public elementary school, for County Regional E.C. Castor J. Love, architect, 5, Wellington-place, Belfast.

Ireland.—Building.—National school at Kilmacoo, Co. Wicklow, and National school at Shragh, Co. Clare, for Commissioners of Public Works. T. Cassedy, secretary, Office of Public Works, Dublin. Dep. £1 each.

Swansea.—Reconstruction.—Station buildings at High-st., for G.W.R. Engineer, Paddington Station. Dep. £2 2s.

***Teddington.**—Internal and external painting, for H.M.O.W. Contracts Branch, H.M.O.W., King Charles-st., S.W.1. Dep. £1 1s.

JULY 29.

***London.**—Extensions.—Extension of Council's generating station in Townmead-rd., Fulham, for Fulham B.C. Preece, Cardew & Rider, 8 & 10, Queen Anne's-gate, Westminster, S.W.1. Dep. £1 1s.

JULY 30.

Leeds.—Dwellings.—Halton Hill, near Leeds, and at Tyersall, Bradford, including masonry, brickwork, etc. Chorley, Gribbon and Foggitt, 3, Park-place, Leeds.

North Kesteven.—Houses.—Two pairs of non-parlour type houses in each of the parishes of Bassingham, Branston and Mere, and Swinderby, for R.D.C. J. Chadwick, S., 25, Claskergate, Lincoln. Dep. £1 1s.

***Tenterden.**—Houses.—14 (in pairs), 7 sites. Clerk, Tenterden, Kent. Dep. £2 2s.

Towcester.—Houses.—Four non-parlour at Litchborough, and 4 non-parlour at Stoke Bruerne, for R.D.C. H. J. Ingman, architect, Milton-chambs., Derngate, Northampton. Dep. £2 2s.

AUGUST 2-11.

London.—Ordinary Works and Repairs to Public Buildings in various districts. Contracts Branch, H.M.O.W., King Charles-st., S.W.1. Dep. 10s. 6d. each.

AUGUST 3.

***Horsham.**—Houses.—On Brighton-rd. site, for U.D.C. Clerk. Dep. £3 3s.

***Thornton Heath.**—Post and Sorting Office.—For H.M.O.W. Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

AUGUST 4.

Thetford.—Houses.—6 at Methwold, for R.D.C. W. J. Haywood, clerk, 4, London-rd.

***West End, Southampton.**—Telephone Exchange. —For Contracts Branch. H.M.O.W., King Charles-st., S.W.1. Dep. £1 1s.

AUGUST 12.

Belfast.—Alterations.—Also and additions to (1) Finniston P.E.S., Oldpark-rd., and (2) to Harding Memorial P.E.S., Cregagh-rd., for Corporation. Education Architect, Victoria-st. Dep. £2 2s.

***Hendon.**—Semi-permanent school.—For Hendon E.C. Clerk to the Council, Town Hall, N.W.4. Dep. £4 4s.

AUGUST 15.

***Prestwich.**—Heating and hot water supply installations, County Mental Hospital. Tenders endorsed ("Central Heating—Prestwich Hospital"), to Clerk, County Offices, Preston. Dep. £5 5s. (payable to Clerk Steward, Prestwich County Mental Hospital).

AUGUST 18.

***Leyton.**—Flats.—48 flats on two storys at White House estate, Leyton Green-rd., E.10, for T.C. B.E. and S. Dep. £10.

NO DATE.

***Doncaster.**—Extensions to Intake Council school, for the E.C. Athron and Dyson, architects, Dolphin-chambers, Market-place. Dep. £2 2s.

***Horsham.**—Demolition of school, for West Sussex C.C. Clerk, County Hall, Chichester.

Lartington.—Painting.—Internal and cleaning of school, for managers of Lartington R.C. school. Managers, The Presbytery, Lartington.

Near Pontefract.—Hotel.—New hotel, Wagon-lane, Upton, near Pontefract. Pennington, Hustler & Taylor, architects and surveyors, Ropergate, Pontefract. Dep. £2 2s.

Rawmarsh.—Houses.—100 on Green-lane housing estate, Rawmarsh, and formation of about 370 lin. yds. of roadway to houses, for U.D.C. J. A. Tonge, L.R.I.B.A., S., Parkgate. Dep. £2.

Rochdale.—Repairs.—To outside of Wardleworth Conservative Club. Secretary, Jermyn-st.

Stoke-on-Trent.—Installation.—Of electrical wiring and fittings at public library, Old Town Hall, Burslem, for T.C. City Electrical Engineer, St. George's-chambers., Kingsway. Dep. £2.

Thorne.—Shelter.—Also conveniences at Moorends, for R.D.C. H. Plewes, S.

Workington.—Building.—Ambulance station in Vulcans-lane, for T.C. J. Penman, A., B.E. and S.

MATERIALS, etc.

JULY 21.

Grays.—Granite chippings. For U.D.C. H. S. Goodall, S.

JULY 28.

Alexandria.—Paints.—Paints, etc., for Egyptian Ports and Lighthouses Administration. Dept. of Overseas Trade, 35, Old Queen-st., London. (No. B.X. 7363.)

JULY 30.

Egypt.—Bricks, etc.—30,000 red bricks, 7,000 fire bricks, 7,000 kgs. fire clay, for Ministry of Public Works, Department of Overseas Trade, 35, Old Queen-st., S.W.1. (B.K. 7360.)

Egypt.—Pipes.—Cast socket pipes, hydrants, valves, etc., for water-supply system, for Egyptian Ministry of the Interior. Department of Overseas Trade. (Ref. G.X.11602.)

ENGINEERING, IRON AND STEEL.

JULY 19.

Middlesex.—Sewerage.—For West Middlesex main sewerage, for C.C. Dodd & Watson, engineers, 3, Central-bldgs., Westminster, S.W.1. Dep. £3 3s.

Tottenham.—Culverting.—In reinforced concrete 240 lin. yds. of Moselle watercourse in Lordship recreation ground, near Mount Pleasant-rd., for U.D.C. Capt. H. F. Wilkinson, E. Dep. £1.

JULY 21.

London.—Girders.—400 tons of steel girders and other steel and iron work, for G.W.R. Engineer, Paddington Station, W.2. Dep. £2 2s.

JULY 22.

Coulsdon and Purley.—Wall.—Reinforced concrete bridge and retaining walls and certain other ancillary works in connection with Council's Refuse Disposal Plant now under construction, for U.D.C. G. A. Ballard, E. and S. Dep. £2.

JULY 25.

Argyll.—Roads.—Improvement of corners, regrading, strengthening, bottoming, surfacing, making of passing places, replacement of culverts, etc., in districts of Ardnamurchan, Cowal, and Mull; building of new sea walls and repair of existing walls, etc., in district of Cowal; and for strengthening of existing bridge over River Orchy at Dalmally, Lorn, for C.C. C.E., Lochgilphead.

Bangor (Ireland).—Drainage.—2,400 yds. of 18-in. cast iron pumping main, and about 2,900 yds. of 24-in. and 27-in. concrete tube sewers, together with manholes, ventilating shafts, and other appurtenant works, for T.C. John Taylor and Sons, engineers, Caxton House, Westminster, London, S.W.1. Dep. £5.

Strabane.—Waterworks.—In village of Donemana, for Strabane No. 1 R.D.C. James L. Rankin, Clerk, Strabane, Co. Tyrone.

Sutton.—Sewage.—Alterations and additions to existing tanks, etc., construction of percolating filters, humus tanks, sludge lagoons and other appurtenant works at sewage purification works situate at Clensham-lane, Sutton, for Sutton and Cheam U.D.C. W. Hedley Grieves, S. Dep. £3 3s.

JULY 26.

Kew Gardens.—Filters.—Filling with media of four 105 ft. dia. percolating sewage filters, and appurtenant works, at Board's Works, Kew Gardens, Surrey, for Richmond Main Sewerage Board. E., Main Drainage Works, West Hall-rd., Kew. Dep. £2 2s.

Kingsbridge.—Water Supply.—4½ miles of 3 in. and 4 in. spun iron supply and distribution mains, concrete covered reservoir, valves, fittings and incidental works, in parish of Modbury, for R.D.C. Lemon and Blizard, consulting engineers, 24, Lockyer-st., Plymouth. Dep. £3 3s.

Pontypridd.—Extensions.—Alterations and extensions to existing sewage disposal works, for Aberdare and Mountain Ash Urban District Councils. Thomas & Morgan & Partners, civil engineers, Pontypridd. Dep. £10 10s.

Rothwell. — Sewage. — Tanks, filters, sludge lagoons, and other works in parish of Rothwell, for U.D.C. Pick, Everard, Keay & Gimson, engineers, 6, Millstone-lane, Leicester. Dep. £2 2s.

Staffordshire.—Underpinning. — Underpinning of abutments and construction of footway tunnel, and carriageway widening and reconstruction works at Midland Railway bridge, Brownhills Common, for C.C. Robert S. Murt, C.S., Lloyd's Bank-chambers, Stafford. Dep. £5.

Wetherby.—Water Supply.—Providing and laying about 4,400 lin. yds. of 5 in., and 800 lin. yds. of 4 in. spun iron pipes, 1,000 lin. yds. 3 in. cast iron pipes, together with construction of covered service reservoir, motor house, and all contingent works, at Spofforth and Sicklinghall, for R.D.C. F. J. Rodwell, E., 37 and 38, Prudential-bldgs., Park-row, Leeds. Dep. £2 2s.

JULY 27.

Pontypridd.—Sewerage.—Alterations and extensions to existing sewage disposal works, for Aberdare and Mountain Ash Urban District Councils. Thomas & Morgan & Partners, civil engineers, Pontypridd. Dep. £10 10s.

ROAD, SEWERAGE AND WATER WORKS.

JULY 18.

Barnoldswick.—Improvements.—To playground at Gisburn-rd. Council school, for West Riding C.C. Education Officer, County Hall, Wakefield.

Caterham and Warlingham.—Sewer.—650 lin. yds. of 7 in. dia. glazed stoneware sewers, complete with appurtenant manholes, for U.D.C. E. and S. Dep. £2 2s.

Dagenham.—Asphalting.—Supplying and laying hallast mastic asphalt in White Barn-lane, for U.D.C. E. & S. Dep. £2 2s.

Leeds.—Repairs.—To tar macadam footpaths in various parks, for T.C. J. E. Acfield, City E.

Ruislip-Northwood.—Sewer.—2,345 yds. of surface-water sewer at West End-rd., Ruislip, for U.D.C. H. R. Metcalfe, E. & S. Dep. £5.

Stretford.—Paving.—In rock asphalt, Rosslyn-rd. (from Great Stone-rd. to Broseley-rd.); Rosslyn-rd. (from Broseley-rd. to Rye Bank-rd.); and Broseley-rd., for U.D.C. E. Parker, S. Dep. £2 2s.

Wallasey.—Making-up: Harold-st.; Doreen-av., Moreton; Stavordale-rd., Moreton; Reedville-grove, Moreton; passage at rear of 1-37, Granville-terr.; Raby-drive, Moreton, for C.B. B.E. and S.

Waltham Holy Cross.—Roads.—Concrete roads, sewers and surface water drains, on Sewardstone-rd. site, for U.D.C. W. C. Holloway, E. and S.

JULY 19.

Hazel Grove and Bramhall.—Kerbing.—Kerbing and channelling of 473 lin. yds. of street and provision of 30 street gullies with certain surface water drainage works in Peter-st., Talbot-st., and Butley-st., Hazel Grove, for U.D.C. S. Dep. £2.

Salford.—Making-up.—Also completing of three streets with tar macadam, for T.C. City E.

Southport. — Making-up. — Of Sandheys-drive, Hilbre-drive and Beresford-drive (part of), for C.B. A. E. Jackson, B.E. Dep. £6 6s.

Staffordshire.—Reconstruction.—Of carriageway north of Brettell-lane, Wolverhampton-Stourbridge-rd., for C.C. R. S. Murt, C.S., Lloyds Bank-chambs., Stafford. Dep. £5.

Tottenham.—Reconstruction.—Of haunches of Seven Sisters-rd. (Woodberry Hill, from Candler-st. to Stoke Newington boundary) with creosoted deal blocks (Firmosec principle) on 10 ins. of reinforced concrete (approximate area of surfacing 3,400 super yds.), for U.D.C. E. Dep. £2.

JULY 20.

Dagenham.—Roads.—Concrete roads, footways, soil and surface water sewers on Central Park housing estate, for U.D.C. E. and S. Dep. £3 3s.

JULY 21.

St. Germans.—Sewer.—Laying and construction of about 216 yds. of 9-in. salt-glazed ware pipe sewer and 3 manholes, along Callington-rd., in parish of St. Stephens-by-Saltash, for R.D.C. J. Percival Heath, clerk, East Cornwall House, Torpoint.

Wembley.—Making-up.—Of Victoria-av.; Victor-grove (parts 1 and 2); Corringham-rd.; Eversley-av.; Morden-gardens; Northwood-gardens; Northolt-garden; Sudbury Heights-av., for U.D.C. C. R. W. Chapman, E. and S. Dep. £1 1s. each.

JULY 22.

Watford.—Sewerage.—About 3,000 lin. yds. of pipe soil and surface water sewers, varying in size from 24 in. to 9 in. diameter, together with manholes and other appurtenant works, for T.C. W. W. Newman, B.E. Dep. £2 2s.

JULY 23.

Coulsdon and Purley.—Making-up.—Of Valley-rd., Kenley (sections 1 and 2), for U.D.C. G. A. Ballard, S. Dep. £1 1s.

Ponsby.—Making-up.—Of Rosemead-av., Ponsby, for Cheshire C.C. S. H. Davies, district surveyor, Brimstage-rd., Heswall. Dep. £1 1s.

JULY 25.

Beddington and Wallington.—Making-up.—Of The Chase (part), for U.D.C. S. F. R. Carter, 42, Woodcote-rd., Wallington. Dep. £2 2s.

Benfleet.—Reconstruction.—Of Rectory-rd., Hadleigh, for U.D.C. S. Dep. £1 1s.

Willesden.—Making-up.—Brook-rd. (section II); Vicarage-way; Helena-rd.; Fleetwood-rd. (section III); Rylands-rd.; Waterloo-rd.; The Circle; The Rise; Elm-way (section II); Park-avenue (section IV); Chesham-st., for U.D.C. P. Wilkinson, E. & S.

JULY 26.

Chingford.—Making-up.—Of Long Deacon-rd. and Beresford-rd. (Part of) in reinforced concrete, together with paths etc., for U.D.C. S. J. Hellier, E. & S. Dep. £2 2s.

Cork.—Sewer.—Main sewer in Blarney-st. and Rock-lane, for T.C. City E.

JULY 27.

Birmingham.—Sewers.—Improvement of River Tame between Bromford-lane bridge and junction of River Rea (about one mile), and incidental works, including construction of about 1½ miles of culverts in abandoned waterways, and intakes, etc., and main valley sewer above Eastern Bridge, Marston Green and branch sewers thereto, mainly in private lands, for T.C. H. H. Humphries, City E. and S. Dep. £4.

JULY 30.

***Leeds.**—Excavating, etc., at Halton Hill, also at Tyersall, Bradford for new roads. Chorley, Grikkon & Foggitt, 3, Park-pl., Leeds.

Public Appointment

JULY 18.

Polytechnic, Regent-st., W.1.—Lecturer in Road making.

Bethnal Green.—Clerk of Works (temporary). Applications endorsed "Clerk of Works," Town Clerk, Bethnal Green, E.2.

Polytechnic, W.1.—Lecturer in Quantity Surveying.

JULY 25.

***Tottenham.**—Housing Estates' General Foreman, by Tottenham U.D.C. Stamped addressed foolscap envelope to Clerk, Town Hall, Tottenham, N.15.

AUGUST 8.

***Leyton.**—Clerk of Works—T.C., Town Hall, E.10.

SEPTEMBER.

Watford.—Instructor for Theoretical and Practical Carpentry, by Herts C.C.

PROPOSED NEW BUILDINGS & OTHER WORKS*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council R.D.C. for Rural District Council; E.C. for Education Committee; B C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B. of E. for Board of Education; M.W.B. for Metropolitan Water Board; Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor, S.; Engineer, E.

Abergavenny.—T.C. reported that 12 houses would be cleared at once and that land for new houses in St. Michael's-rd., at £325, would be purchased.

Accrington.—T.C. approved plans for 18 houses for aged persons on Laneside estate.

Alnwick.—M.H. sanctioned borrowing by U.D.C. of £15,623, for Clayport housing scheme.

Anstruther.—Fifeshire C.C. have plans in hand for reconstruction at Waid Academy.

Ashford (Kent).—Montague Burton, Ltd., Leeds, to erect new shop premises in High-st. Tenders to be invited. Plans by Architects' Dept., Hudson-rd. Mills, Leeds.

Ashington.—G. Bently been instructed to prepare plans for 70 houses for aged people on Rose Cottage site for U.D.C.

Barrow-in-Furness.—Plans passed: Church on west side of Michaelson-rd.

Bedale.—Housing Committee of R.D.C. recommended site at Aiskew behind Vale of Mowbray Nurseries for 10 houses, proposed by Council.

Bedford.—R.D.C. received M.H. sanction to purchase ground and erection of houses at Odell.—Council also received from Minister sanction to loans of £330 for purchase of land in Kempston rural parish and £3,790 for 12 houses.

Belfast.—Private company been formed under title of Shaftesbury Estates Co., 10, College-sq. North, with view to development for building purposes of Belfast Castle estate.

Bexley.—U.D.C. approved: Lay-out plan and houses, Montrose-av. and Welling-way, and block of 4 houses, Bellegrove-rd., Welling, New Ideal Homesteads, Ltd.; also 2 pairs of houses on land freed by abandonment of Eastcote-rd.; church, East Wickham, for Parochial Church Council; new street and 8 semi-detached bungalows, East Wickham, P. G. S. Walker.

Birmingham.—Consultative Committee for Community Associations issued an appeal for £1,500 towards erection of community hall for Kingstanding estate.

Blackpool.—C.B. approved B.S. estimate for alterations and repairs at premises 161, Dickson-rd.—Council resolved: that Parks Superintendent be instructed to use chestnut fencing on south side of North Park-rd co-extensive with Golf Links.—B. S., received instructions from Housing Committee on rebuilding premises in Church-st.—B.S. to prepare plans showing alterations to Harrowside Bridge garage.—B.S. to prepare specifications, and advertise for tenders for external painting of Victoria-buildings, Cleveleys.—T. E. Mercer obtained Council's consent to 6 houses on land in Dalewood-av.—Land belonging to Council situate on northerly side of Highfield-rd. East, to be utilised as site for proposed crematorium.—B.S. to be instructed to re-open negotiations with Mr. Pollard with respect to a proposed reconstruction of premises in Bolton-st.—Council approved alterations to heating apparatus at Revoe school.—Conveniences at Rigby-rd. bus station to be altered.—Application to be made for sanction to borrowing £160 for electricity sub-station and £40,602 for 74 houses.—Council resolved that elevation, now submitted by B.S. of factory proposed by Bee Bee Biscuit Co., Ltd., on land on easterly side of Devonshire-rd, be approved.—Plans passed: 5 houses, Haddon-rd., E. Riley; 18 houses, Sandicroft-rd., J. R. Fielding; 10 houses, Rosebery-av., Hornby Building Co.; 12 houses, Maitland-av., A. A. Holt; 12 houses, Devonshire-rd., R. Fielding & Sons; 6 houses, Gisburn-grove, E. Spencer; 8 houses, Sandgate, J. Midgley; 6 houses, Blenheim-av., A. J. Waterhouse; 12 houses, Woodstock-gardens, M. E. Senior & Son; alterations, Lever-st., Whitegate Working Men's Club; additions and alterations, Waterloo-rd. and Lytham-rd., H. Best; transformer chamber, Weymouth-av., Electricity Committee.—Offer of A. & E. Fielding, for land situate in Warbreck Hill-rd., been accepted.—Also offer of Mills and others, for surplus land situate on north side of Norbreck school site, been accepted.—B.S. to carry out certain renovating work in offices in municipal buildings.

Blyth.—Housing and Town Planning Committee of T.C. approved plans by L. Leeper, B.E., for 50 houses for aged people. Tenders to be invited.

Bolton.—Streets Committee approved plans for extension to Ryer Bros.' foundry in Bark-st; alteration of Yorkshire Penny Bank's premises in Bradshawgate.

Boston.—T.C. received M.H. sanction to borrow £11,050 for buildings at Boston Isolation Hospital, and the Council accepted an amended tender at £9,797.

Bournemouth.—T.C. approved: garage and workshops, Yelverton-rd., Bournemouth & Poole Electricity Supply Co., Ltd.; alterations and additions, Golf Club House, Queen's Park South-drive, Meyrick and Queen's Park Golf Club, Ltd.; 6 flats, adjoining "The Barn," Branksome Wood-rd., Mrs. F. Faulkner; 10 lock-up garages, rear of 80-86, Avon-rd., W. Hoare & Sons; 12 flats, Bath-rd., T. Randall; 2 pairs of houses, plots 5 and 6, Kingswell-rd., and plots 19 and 20, Stanton-rd., W. J. Clapcott.

Brampton.—S. W. B. Jack, architect, Lloyds Bank-chams., Carlisle, prepared plans for 6 dwellings near Station-rd.

Brentwood.—Committee of Visitors of Essex C.C. submitted for approval of local authorities plan of proposed additions to farm buildings at Mental Hospital at £2,200; six cottages on hospital estate for staff at £2,500.

Bridlington.—A. Everingham, S., preparing plans for additional classrooms at school clinic.

Buslingthorpe.—Tenders being invited for spirit store at Buslingthorpe Tannery for Broadhead & Conyers, tanners. Plans by F. L. Charlton, architect, Leeds.

Cannock.—Committee of Management of Progressive Club, Market Hall-st., to erect premises on site of existing structures, to plans of S. Harrison, architect.—National and Provincial Bank to rebuild its present offices in Stafford-rd., and Midland Bank have acquired premises in Stafford-st. for branch bank, existing premises to be reconstructed.—Britannic Assurance Co., Birmingham, purchased property in Church-st., which will be replaced by a new suite of offices.—There is proposal for reconstruction of "Crown Hotel" in Market-place.

Cheadle.—Sanitation Committee propose swimming baths.—E.C. propose to acquire site at High Grove-rd. for Council school.

Chester.—W. Williams, Sons & Co., Ltd., builders, West-st., propose 42 houses on Hoole-rd. Plans by R. B. Keane, architect, St. Werburgh-st.

Chesterfield.—T.C. propose to acquire land for additional housing sites at Bacon's-lane, Walgrove-rd. and Springfield-av.

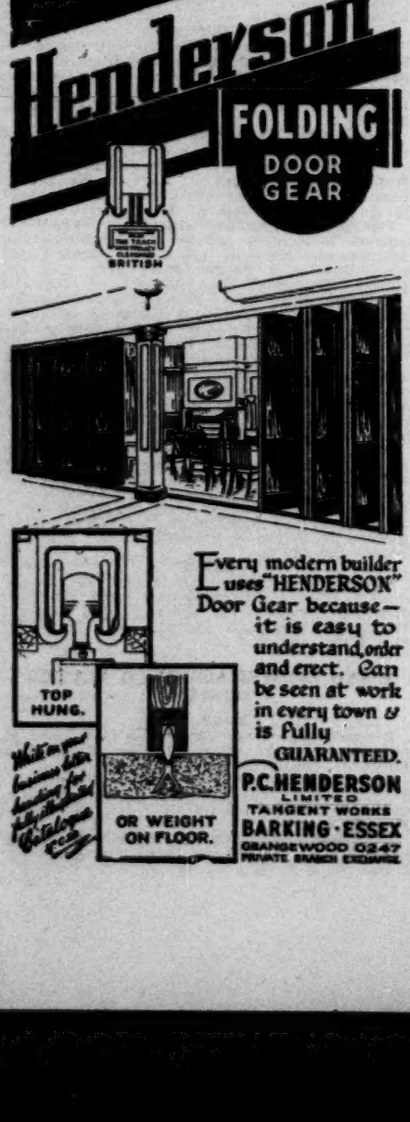
Colchester.—T.C. received M.H. consent to erection of 100 non-parlour-type houses on portion of Ipswich-Harwich rds. site. Tenders to be invited, and B.S. is also to submit estimate.

Cork.—D. J. Tierney, L.R.I.B.A., architect, 16, Cook-st., been appointed to prepare plans for alterations to sanatorium.

Coventry.—Plans and specification of new church of St. Mary Magdalen, Hearsall-common, been approved by Ecclesiastical Commissioners. Plans prepared by H. T. Jackson, and building will provide accommodation for about 400 people.

Crewe.—Cheshire E.C. submitted scheme to B. of E. for conversion of part of Crewe Hall, for training college.

Crewkerne.—U.D.C. amended recommendation of Council to ask M.H. to sanction erection of further batch of houses on Severalls site.



Criccieth.—U.D.C. received M.H. sanction to Council proceeding to obtain tenders for 8 non-parlour-type houses.

Darlington.—T.C. approved: J. E. Chilton, 10 houses, Lodge-st.

Deal.—T.C. approved:—Methodist Church hall and store, Mill Hill; 6 houses, semi-detached pairs, St. Leonard's-rd., by G. H. Dunne & Son.

Doncaster.—Board of Management of Yorkshire Institution for Deaf acquired land adjoining school premises for extensions.

Dover.—T.C. approved:—6 houses on the west side of Chevalier-rd., for J. Morgan.

Dudley.—T.C. approved: Mitchells & Butlers, Ltd., Cape Hill Brewery, Birmingham, "New Inn," Priory-rd.; Frank Myatt, Ltd., Holt-st., Birmingham, rebuild "Hen and Chickens," New-st.; J. Underwood, 288, Stourbridge-rd., Harts Hill, alterations, 288, Stourbridge-rd., Harts Hill; T. W. Crook & Sons, Ltd., Abberley-st., Dudley, addition to warehouse, Abberley-st.

Dundee.—Corporation propose 54 houses at East and West Quadrant. D. McLay, City Architect.—Corporation intend to extend Butterburn School. D. McLay, City Architect.

East Ham.—C.B. approved erection of fencing on Reynolds-av. site.—Corporation recommend that existing buildings at Barn site be demolished, and erection of residential building, also stabling and garage. B. E. submitted sketch plans and estimate of cost.—Plans passed:—Loud speaker chamber, rear stage, Coliseum Cinema, Romford-rd., G. Coles; house and shop and a house, 176-8, High-st. south, corner Mortimer-rd., A. G. Manning; alterations, 129, High-st., north, R. J. L. Slater; 15 lock-up garages and workshop with living accommodation over East Ham and Barking By-pass, R. J. L. Slater; garages north, 111, Cleves-rd., F. C. Saunders.

Edinburgh.—Plans prepared for residence, garage and other offices at Braids Hill-rd. Menzies, Cockburn & Johnstone, architects, 3, Palmerston-place.—Plans prepared for residence, garage and usual offices at Craiglochart-pk., Craiglochart. J. C. Robertson, architect, 52, Craiglochart-rd.—School for 1,000 scholars at Niddrie Mains. E. J. MacRae, City Architect.—Estimated at £3,500, reconstruction and conversion scheme to be carried out at St. Mary's R.C. Cathedral at Brougham-st. Reid & Forbes, architects, Great Stuart-st.

Ellesmere Port.—Crosville Motor Services, Ltd., Chester, propose bus shelter at Cemetery Corner.

Epping.—Clerk to L.C.C. informed R.D.C. that they had acquired about 142 acres of land at Chigwell under part III. of Housing Act, 1925.

Epsom.—U.D.C. approved: 5 pairs of houses, Westlands estate, Dorking-rd., Watts & Co.; 8 shops in Manor Green-rd., W. Crouch; 2 blocks of flats, Hook-rd., for Council.

Exeter.—J. Lyons and Co., Ltd., Cadby Hall, London, purchased 229, High-st. and premises adjoining, where they intend opening branch restaurant. Plans before Council.

Falkirk.—Plans prepared for reconstruction and extension of houses at Majors-loan. J. G. Callender, architect, Royal Bank-buildings.—Plans prepared by firm's own architect for office work, at £5,000, for R. & A. Main & Co., Ltd., Gothic Inn works, Camelon.

Feltham.—U.D.C. approved: 3 pairs of semi-detached houses at Staines-rd., T. Millman, Ltd.

Friern Barnet.—S., to U.D.C., prepared plans for clearance area.—Plans passed:—Two blocks of flats, Oakleigh-rd (north), J. Hutchinson; block of flats, Sutton-rd., D. Dakers; four shops, High-rd., Whetstone, C. D. Lewis.

Gateshead.—T.C. agreed to proposal to erect bus shelter with conveniences at east end of Tyne Bridge at £2,875. F. R. Patterson, B.E.—Finney & Co., Ltd., Newcastle, to erect new £6,000 warehouse to plans by Liddell & Bachelor, 12, Eldon-sq., Newcastle.

Glasgow.—Plans prepared for reconstruction scheme at 47 to 57, Hutchieson-st., Thompson, Sandilands & McLeod, architects, 248, West George-st.; reconstruction and additions at 243-245, Sauchiehall-st., W. Baillie, architect, 78, Park-drive (South), Scotstoun; storage accommodation, Shettleston-rd., R. Ewan, architect, 170, Hope-st.; chocolate factory buildings, Anniesland, Dumbartonshire, J. G. Aitchieson, architect, 170, Hope-st.; reconstruction and additions, Victoria Crescent-rd., Dowanhill, J. J. Devlin, 37, St. Andrews-drive, Pollockshields; reconstruction and additions, Corbett-st., Tollcross Miners' Welfare Society, Miners' Institute, Gall & Barr, architects, 59, Bath-st.; shop premises at Aberfoyle-st., J. Cox, architect, 43, Aberdour-st.

Great Preston (Yorkshire).—Tenders invited for rebuilding of "New Inn" to plans by P. Firth, A.R.I.B.A., 4, King-st., Wakefield.

Heston and Isleworth.—U.D.C. approved: R. T. Warren, extension of The Vale, Heston House estate, in westerley direction to Orchard estate and for construction of 40-ft. road from Cranford-lane; amended lay-out of Firs Estate, Cranford, J. Laing & Co., Ltd., Mill Hill, for 98 houses.

Huddersfield.—32 houses to be erected in Diamond-st. by T.C. Tenders being invited. Plans by B.E., 1, Peel-st.

Irvine.—Ayrshire C.C. to carry out reconstruction and conversion scheme at Bridgegate for county public library. W. Reid, architect, Wellington-sq., Ayr.

Lancaster.—Corporation B.S. been instructed to alter isolation hospital for housing accommodation.—Plans passed: Lay-out of 8 new streets on Scale Hall estate, C. W. L. Pourhyn Hornby; lay-out for 9 new streets and 102 houses on Ryelands estate, Corporation.

Leeds.—Crosland & Co., 70a, Kirkgate, proposing offices and works, Wharfe-st. Plans by Kitson Parish Ledgard & Pyman, FF.R.I.B.A., Lloyds-buildings, Vicar-lane. Contracts not let.

*See also List of Contracts, Competitions, etc.

Leyton.—T.C. approved: Hardman Estates, Ltd., block of flats, Forest Court, The Forest, Snaresbrook; Hardman Estates, Ltd., 13 garages and drainage of 13 garages and 22 flats Forest Court, The Forest, Snaresbrook.

Lincoln.—T.C. approved: Mowbray & Co., Ltd., rebuilding "Duke of Wellington" hotel, 37, Broadgate; trustees of St. Faith's Institute, alterations and additions to institute, West-parade; Mowbray & Co., Ltd., alterations and additions to "Vine Inn," 108, Newland-st. West; Bowins & Burkill, 18 houses, Mount-st.; J. M. Harrison & Son, 6 houses, Yarborough-cres.

Liverpool.—Corporation recommend to sell to G. Fraser and S. Dalton, Wellington-bldgs., The Strand, land in Gill-st., Dansie-st. and Gt. Newton-st., subject to site being cleared and new buildings erected.—E.C. recommend that plans prepared by Land Steward and Surveyor for extension of both departments of "Roscoe" council school be submitted to B. of E.—E.C. also recommend, subject to approval of B. of E., plans prepared by Land Steward and Surveyor for public elementary school on Dovecot (Ackers Hall Farm) estate.—Council recommend leasehold interest in 78-84, Gill-st. be transferred to Housing Committee for housing purposes.—M.H. forwarded formal sanction of M.H. to borrowing of £350,000 for purposes of street improvement.

London (Deptford).—B.C. approved: J. S. Collyer, 147, Downton-av., Streatham, S.W.2, building at rear of 253, New Cross-rd.

London (Finsbury).—B.C. recommend approximately £1,400 upon demolition work and consequential repair at Wharf-rd. depot.

London (Fulham).—B.C. recommend tenders be invited for painting and redecoration work at tuberculosis dispensary in accordance with the specification by B.S.—Tenders also to be invited for painting and decoration of certain exterior elevations of town hall and demolition and excavation work in connection with extension of generating station.—Drainage plans passed:—W. J. Marston & Son, electricity sub-station, North End-rd., adjoining W. Ken. Cinema; W. J. Marston & Son, additional building, Carnwath-rd.; G. Barker, new building, 427-429, North End-rd., and 4-5, Eustace-rd.; F. Marshall & Co., additional building, 53, Vanston-pl.

London (St. Pancras).—L.C.C. recommend borrowing by B.C., of £3,645 for depot purposes in Bartholomew-rd.

London (Woolwich).—L.C.C. recommend £985 in respect of renovation of wooden stage on northern foreshore of Woolwich-ferry and reorganisation of workshops.

Macclesfield.—F. Marsland, Park Brook estate, prepared plans for shopping centre on corner of Ivy-lane and Chester-rd.

Machynlleth.—Building Committee for proposed Cottage Hospital has under consideration details of scheme for building site near town. Architect, C. Frederick Ellis, L.R.I.B.A., May Bank, Aberdovey, Merioneth.—U.D.C. propose erection 10 houses on housing site. Plans by S.

Manchester.—Managers of St. Oswald's C.E. Schools propose additions.—Housing Committee propose installation of electric light at Pollard-st. and Chester-st. dwellings at £945.—Housing Committee propose 28 houses, Bristol-lane estate, Newton Heath.—E.C. propose erection sub-station on Heaton Park-rd.—Plans approved:—Booth Tonge & Co., 67, Church-st., Harpurhey, 16 houses, Lewis-av. and York-av., Blackley; W. C. Coope & Co., Worsley-av., 8 houses, Meadow-way, Moston; W. Booth, 1, Rupert-st., Newton Heath, 5 houses, Rupert-st. and Windsor-rd., Newton Heath; J. Webster, Goodman-st., Blackley, 6 houses, Westleigh-st., Blackley; G. Hodson, 5, Hill Top, Blackley, 34 houses, Ratbbourne-av., Hill-lane, Blackley; R. Daxbury, Unionter., Bury Old-rd., 8 houses, Heywood-st., Cheetham; T. Fogarty & Co., Tyson-st., Cheetham, 48 houses, Sidney-rd., Hertford-rd. and Wilson-rd., Blackley; F. A. Howard, 4, South-drive, Choriton ville, 10 houses, Clarence-rd. and Alwyn-drive, Rusholme; C. Oldham (junior), 29, Rothesay-rd., Crumpsall, 32 houses, Royle Green-rd. and Hollyway, Northenden; E. L. Doyle, 15, Crumpsall-lane, 16 houses, Holland-rd. and Kenslow-av., Crumpsall.

Mickley.—It is proposed to erect a bridge across Tyne at Mickley Junction as war memorial scheme of Mickley and Ovington.

Middlesbrough.—M.H. sanctioned clearance of the Nile-st. area. S. E. Burgess, M.B.E.

Moseley.—Greenhill Estate, School-rd., Moseley, been sold for development on residential lines. Scheme of development, for which John White, building contractor, of 5, Edmund-st., Birmingham, is responsible for purchasers, Hot Pressed Products, Ltd., proposes erection of about 90 houses and 12 shops with living accommodation on frontage to School-rd.

Netherton.—Collieries Welfare Committee, following visit by Capt. O'Kelly, ground supervisor and architect, to Central Mining Welfare Committee, London, is to negotiate for land for welfare scheme, to cost £2,000.

Newbiggin.—Plans approved for Pentecostal temple. Architects, Weatherall, Dent & Pickersgill, Barnard Castle.

Newburn-on-Tyne.—U.D.C. approved plans for layout of East Denton estate. Plans by Hetherington & Wilson, 52, Westgate-rd., Newcastle.

Newcastle-on-Tyne.—Plans approved for 7 houses in Flint-st., for Mr. Canning. Cackett, Burns-Dick & McKellar, architects, Ellison-pl.—Marshall & Tweedy, Mervyn House, Pilgrim-st., architects for development of Newton-pk., for building purposes.—Plans approved for improvements to "Gladstone Hotel." Architects, Hetherington & Wilson, County-chambs., Westgate-rd.—Storey & Reid, 5, Glendale-av., Monkseaton, and H. & S. Alderson, 3, Ashfield-rd., Monkseaton, to erect about 90 houses on Jesmond Towers estate.—Housing Architect been instructed by Housing Committee to prepare plans for 100 houses at Cowgate.—J. Arnott & Sons, Newcastle Quayside, to erect loading dock and tanks and plans approved by City Council.—Tenders being invited by City Council for 198 houses on Ferguson-lane housing estate. R. G. Roberts, Housing Architect, 18, Clothmarket.—Trutime Deliveries, Ltd., to erect garage in Selbourne-gardens, to plans by Marshall & Tweedy, 129, Pilgrim-st. No contract let.—No contracts yet placed for additional storey to Higginbottom's premises, Pilgrim-st. Liddell & Bachelor, 12, Eldon-sq.—City Council inviting tenders for building work at Cattle Market to plans by F. H. Holford, City Architect.

Newcastle-upon-Tyne.—T.C. received sanction to raising following loans: £17,100 for purchase of secondary school site on Westgate-rd.; £8,898 for additional staff accommodation at Barrasford Sanatorium, and £4,215 for secondary school purposes in Grange-rd.

Normanton.—U.D.C. considering 60 additional houses.

North Shields.—Tynemouth T.C. received sanction from M.H. in respect of alterations to Moor Park Hospital, at £1,666, and for demolition and reconstruction of the mortuary, at £250. Work will be done by direct labour.

Norton-on-Tees.—U.D.C. applied to M.H. for sanction to borrow £13,100 for housing purposes. T. Forrest, S.

Nottingham.—Corporation to erect 44 houses and 12 flats on Coalpit-lane and Colwick-rd. areas.—Housing Committee propose 600 houses and flats at Dunkirk, Snainton Dale, Cardale-rd. and Bulwell.—E.C. acquired site on Nuthall Temple estate for elementary school.

Ormskirk.—U.D.C. approved: 8 houses, Bye-Pass-rd., G. Spurr; 18 bungalows, Westhead, J. L. James.

Osmondthorpe.—Tenders to be invited for C. of E. Church for Diocesan Authorities of Ripon. Plans by F. L. Charlton.

Padiham.—U.D.C. recommend library building and lecture hall.

Paisley.—Corporation to erect 192 houses at Shortlands. J. Lee, C.E., Burgh Architect and Surveyor.

Preston.—F. Howorth, L.R.I.B.A., 10, Theatre-st., preparing plans for memorial chapel on Ribbleton-av., for Trustees of Ribbleton-av. Wesleyan Church.

Rhyl.—Canon D. Edwardes Davies, vicar of Rhyl, appealed for £5,000 in aid of St. Asaph Cathedral restoration scheme.

Rugby.—U.D.C. approved: 3 pairs semi-detached houses, 28-31, Millfields-av., Millfields Estate Co., Ltd.; reconstruction of 8 garages, plot 133, Claremont-rd., B. Bartlett.

Runcorn.—R.D.C. instructed S. to prepare plans for conversion of Castle Park to Council's requirements for administrative purposes.

Salford.—Preparations well advanced for 265 flats in Seedley-rd., Pendleton.

Scarborough.—T.C. approved shops on Northstead estate to plans by H. W. Smith, Council Architect.—T. H. Jones, 102, Westborough, architect for conversion of "Wheatcroft" into hotel.

SLIDING DOOR GEAR

Phone HOP 4107 — British Made. — Phone HOP 4108

MECHANICAL PERFECTION

COBURN SYSTEM

Latest Catalogue on Request.

THE BRITISH TROLLEY TRACK CO., LTD.
Orange Street, S.E.1.

Agents Everywhere.

Scunthorpe.—U.D.C. approved recommendation of Markets Committee that E. and S. be instructed to prepare scheme for covering in new market site.

Shadwell.—Wm. Walker & Co., Ltd., propose additions at "Wellington Inn." Tenders invited.

Sheffield.—T.C. approved: 7 houses and garages, Westbourne-rd., J. Marsh & Son; 19 houses and garages, and alterations, Hoober-av. and Marsh House-rd., T. H. Bailey; 2 flats, workshop and store, Duchess-rd., H. M. Blenkhorne & Son; 140 houses, Clifton-cres., Clifton-lane, Clifton-av., and Handsworth-rd., Melling Bros., Ltd.; house and factory, Porter-st., Duke-lane and Union-lane, Sheffield Cabinet Co.; 400 houses, Shiregreen estate, Estates Committee.

Shoreham.—U.D.C. proposing to purchase for £3,200 7½ acres of land at corner of Middle-rd. and Eastern-av. for erection of 90 houses for working classes.

Solihull.—Warwickshire C.C. to make alterations to police court, providing more accommodation.

Southend-on-Sea.—N. Evans, architect, 41, High-st., to prepare plans for stadium in West-st., Prittlewell.—Considerable extensions proposed to Hippodrome, Southchurch-rd.

South Mimms.—Clerk to R.D.C. reported that purchase of land at Cranborne-crescent, acquired by C.C. for elementary school, been completed. It was decided to suggest to C.C. that no time be lost in proceeding with erection of school.—Plans approved: Three shops with living accommodation, cold storage and garages, Sainsbury and Co., Great North-rd.; eight semi-detached bungalows, Oakroyd-av., Hicks.

Southport.—T.C. recommended application to M.H. for approval to scheme for further 104 houses on Guildford-rd. housing site.

South Shields.—R.D.C. applied to M.H. for sanction to 48 additional houses on Marsden housing site. W. Walsh, S.—T.C. approved plans submitted by Rev. J. Robson, for church hall at end of Jackster., Tyne Dock, in connection with All Saints' Church.

Stafford.—E.C. propose senior boys' school in Harrowby-st.—Site been acquired in Cherry-st., for County Technical College.

Stocksbridge (Sheffield).—S. Fox & Co., Ltd., to carry out scheme of extensions to works. Plans by G. Shipley, architect, Leeds.

Stonehaven.—J. R. McMillan, architect, prepared plans for office accommodation at Stonehaven for Kincardineshire C.C.—Viewmount scheme to cost £4,774 and Robert-st. scheme £2,218.

Sudbury.—T.C. received M.H. approval to invitation by Council of tenders for erection of 24 houses of non-parlour type, on Wents estate.

Sunderland.—Building model garden city at Sunderland, to be started in autumn. Company (Grindon Estates, Ltd.) been formed

Swansea.—Montague Burton, Ltd., to erect shop premises. Plans by Architects' Dept., Hudson-rd. Mills, Leeds. Tenders being invited Site in High-st.

Tavistock.—U.D.C. approved:—15 cottages at West Bridge by J. Kerswill & Sons.

Totnes.—T.C. given instructions for preparation of scheme for 50 non-parlour type houses.

Wakefield.—Corporation propose alterations at ladies' lavatories in Cross-sq. at £200.—Conveniences and shelter are to be erected in Agbrigg-rd. at £245.—Alterations to grandstands to be carried out at Belle Vue for Trinity F.C.

Wallsend-on-Tyne.—T.C. approved plans prepared by Caws & Heseltine, Fawcett-st., Sunderland, for nurses' home in Elton-st.—T.C. approved plans for additions to Willington Quay Labour Party's hall in Back Bewicke-rd.—High Farm Residents' Association to communicate with Minister of Education asking him to press T.C. to erect school in High Farm district.

Walsall.—F. W. Woolworth & Co., Ltd., acquired shops in Park-st. Shops to be demolished and two-story building erected on site.—Plans passed by T.C.:—extension to factory, Wednesbury-rd., Walsall Litho Co.; 8 houses, Sutton-rd., for Busst & Holmes; 6 houses, Follyhouse-lane, for W. Phipps.

Warrington.—Proprietors of Gift House, 45, Sankey-st., propose reconstruction of premises.

Warwick.—T.C. approved: 4 shops and houses combined, Peel-rd., Packmores estate, Harris Bros.

West Ashford.—R.D.C. to seek sanction to erect 30 houses at Charing, Pluckley, Smarden, Shadoxhurst and Great Chart.—Scheme for 6 houses in Bethersden, 6 in Westwell, and 2 each in Egerton and Kingsnorth to be proceeded with.

"Wall-board v. Plaster."

Messrs. Thames Board Mills, Ltd., write as follows:—"In the issue of *The Builder*, of July 1, we notice in the questions column of your "Inquiry Bureau," page 25, a letter on "Wall-board *v.* Plaster," and mention is made here of how fibre-board compares with plaster when fixed; also we observe that a price of 3½d. per sq. ft. is referred to. We think this price may refer to one of the thicker wallboards, and as you know we are manufacturers on a large scale of "Essex" board in this country, and this material can be obtained at a much lower figure than that mentioned, and for your information we give you the prices of our $\frac{3}{16}$ in. and ¼ in. thicknesses:—

$\frac{3}{16}$ in. lots of 1,000 ft., 2d. per sq. ft.; $\frac{3}{16}$ in. lots of less than 1,000 ft., 2½d. per sq. ft.; ¼in. lots of 1,000 ft., 2½d. per sq. ft.; ¼ in. lots of less than 1,000 ft., 2¾d. per sq. ft.

PRICES CURRENT OF MATERIALS.*

Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge.

	£ s. d.
Best Stocks	4 3 6
Second Hard Stocks	3 18 6

Per 1,000. Delivered at London Goods Stations.

	£ s. d.		£ s. d.
"Phorpres"	2 11 3	Flettons, B'ln'se	3 5 3
Flettons at King's Cross	2 11 3	Best Blue Pressed Staffs	9 5 0
Do., grooved for Plaster	2 13 3	Do. Bullnose	9 15 0
White Midhurst Facing Bricks (delivered London site)		Blue Wire Cuts	7 5 0
	5 0 0		
"Phorpres" Whites (do.)	3 17 3		

Best Stourbridge Fire Brick :—

2½ in.	8 11 0	3 in.	10 3 0

GLAZED BRICKS—			
Best White Ivory and Salt Glazed Stretcher	21 0 0	D'ble Str'tch'rs	29 10 0
		D'ble Headers	26 10 0
Headers	20 10 0	One Side and two Ends	30 10 0
Quoins, Bullnose and 4½ in. Flats	27 10 0	Two Sides and one End	31 10 0
		Splays, and Squints	28 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

BREEZE CONCRETE SLABS.

Delivered London.

	s. d.		s. d.
2 in. per yd. super	1 11	3 in. per yd. super	2 9
2½ in. " "	2 4	4 in. " "	3 6

	s. d.	
Thames Ballast	8 0	per yd.
Pit Sand	11 0	" "
Thames Sand	11 0	" "
Best Washed Sand	11 6	" "
½ in. Shingle for Ferro-Concrete	8 6	" "
¼ in.	11 0	" "
½ in. Broken Brick	10 6	" "
Pan Breeze	8 0	" "

delivered 2 miles radius Paddington.

Per ton delivered in London area in full van loads.

Best Portland Cement. British Standard Specification. Test			
In Jute Sacks (11 to ton)	£2 4 9	to	£2 6 9
In Free Paper Bags (20 to ton)	2 6 0	to	2 8 0
Alongside Vauxhall in 80 Ton Lots			
Jute Sacks (11 to ton)	1 17 9		
Free Paper Bags (20 to ton)	1 19 0		
Ferrocrete per ton extra on above	0 7 6		
Vitocrete per ton extra on above	0 7 6		
Lightning Brand Aluminous Cement in Jute Sacks (20 to ton)	5 2 9	to	5 8 3

NOTE.—Jute Sacks are charged 1s. 6d. each and credited 1s. 6d. each nett if returned in good condition within three months carriage paid.

Super Cement (Waterproof) Paper Bags free	3 16 0
Ciment Fondu (F.O.R. Works)	4 15 0
Roman Cement	6 15 0
Parian Cement	5 15 0
Keene's Cement, White	5 15 0
" " Pink	5 10 0
Plaster, Coarse, Pink	3 0 0
" " White	3 12 6
" Fine	4 12 0
Sirapite, Coarse	3 9 0
" Finish	3 17 0
Grey Stone Lime	2 10 9
Chalk Lime	2 10 9
Best Ground Blue Lias Lime	1 17 6
Hair per cwt.	2 2 6
Granite Chippings	1 12 0

NOTE.—Sacks are charged 1s. 9d. each and credited 1s. 6d. if returned in good condition within three months carr. pd.

Stourbridge Fireclay in s'cks 37s. 0d. per ton at rly. dp.

STONE.

BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	s. d. 2 10
BEER STONE.—RANDOM BLOCK—	
Free on rail at Seaton Station per ft. cube	2 3
Delivered free on rail Nine Elms, S.R. per ft. cube	3 1½

Selected approximate size one way, 1d. per cubic foot extra; selected approximately three sizes or for special work, 3d. per cubic foot extra.

PORTLAND STONE—	
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park Paddington, G.W.R., per ft. cube	4 4½
Do. do. delivered on road waggons at above stations, per ft. cube	4 5½

White basebed, 3d. per ft. cube extra.

NOTE.—1d. per ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.

CHILMARK—RANDOM BLOCK—	
At Nine Elms, per ft. cube	3 11
HOPTON-WOOD STONE—	s. d.
F.O.R. Quarries, Wirksworth, Derbyshire, Random blocks from 10 ft. and over P. ft. cb.	14 0
Sawn two sides	22 6
Sawn three or four sides	27 6

YORK STONE, BLUE—*Robin Hood Quality.* Delivered at any Goods Station, London.

6 in. sawn two sides landings to sizes (under 30 ft. super) Per ft. super	5 6
4 in. rubbed two sides, ditto "	6 0
½ in. sawn two sides slabs (random sizes) "	2 3½
1 in. to 2½ in. sawn one side slabs (random sizes) "	1 6½
1½ in. to 2 in. ditto., ditto "	1 3½

HARD YORK— s. d.

Delivered at any Goods Station, London. Scappled random blocks Per ft. cube	6 3
6 in. sawn two sides landing to sizes (under 40 ft. super) Per ft. super	5 1½
6 in. rubbed two sides, ditto "	6 1½
4 in. sawn two sides slabs (random sizes) "	3 1½
3 in. ditto ditto "	2 8
2 in. self-faced random flags Per yd. super	8 0

CAST STONE.

Delivered in London area in full van loads, per ft. cube: Plain, 8s. 6d.; Moulded, 9s. 6d.; Cills, 10s. 0d.

WOOD.

GOOD BUILDING DEAL.

Inches.	per stan.	Inches.	per stan.
4 × 11	£24 10	3 × 6	£17 0
4 × 9	20 0	3 × 11	19 10
4 × 8	20 0	2 × 11	19 10
4 × 7	18 0	3 × 9	19 10
3 × 8	18 0	2½ × 9	19 10
3 × 7	18 0	3 × 4½	17 10
2½ × 7	18 0	3 × 4	17 10

PLANED BOARDS.

1 × 11	£22 10	1 × 9	£21 0

PLAIN EDGE FLOORING.

Inches.	per sq.	Inches.	per sq.
⅝	16/-	1½	25/-
¾	17/-	1¾	27/6
1	20/-		

TONGUED AND GROOVED FLOORING.

Inches.	per sq.
1	21/-
1½	26/-
1½	27/6

MATCHING (BEST).

Inches.	per sq.
⅝	15/-
¾	16/6
1	20/-

ins. BATTENS.	s. d.
¾×2.....per 100 ft.	2 0

SAWN LATHS.

	s. d.
Per bundle	2 3

1 INCH AND UP THICK.

Average price for prime quality.

	£ s. d.
Dry Austrian Wainscot, per ft. cube	0 15 0
Dry American and/or Japanese Figured Oak, per ft. cube	0 12 0
Dry American and/or Japanese plain Oak, per ft. cube	0 10 0
Dry sq. edged Honduras Mahogany, per ft. cube	0 14 0
Dry log-cut Honduras Mahogany, per ft. cube	0 16 0
Dry Cuba Mahogany, per ft. cube	1 1 0
Dry Teak, per ft. cube	0 14 0
Dry American Whitewood, per ft. cube	0 10 0
Best Scotch Glue, per cwt. ... £4 10 0	to —
Liquid Glue, per cwt. 4 7 0	to 5 10 0

SLATES.

First quality slates from Bangor or Portmadoc, carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

	£ s. d.		£ s. d.
24 by 12	30 0 0	18 by 10	16 10 0
22 by 12	26 10 0	18 by 9	14 12 6
22 by 11	24 10 0	16 by 10	14 5 0
20 by 12	24 0 0	16 by 8	11 0 0
20 by 10	20 2 6		

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons.

	Per 1,000. f.o.r. London.
Best machine-made tiles from Broseley or Staffordshire district	£4 10 0
ditto hand-made ditto	5 3 6
Ornamental ditto	5 8 6
Hip and valley tiles (per dozen) { Hand-made	0 9 6
{ Machine-made	0 9 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION, PER TON—	
R.S. Joists, cut and fitted	£11 0 0
Plain Compound Girders	12 0 0
" " Stanchions	15 0 0
In Roof Work	18 0 0

MILD STEEL ROUNDS.—To London Station, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
¼ in.	12 0 0	⅝ in. to ¾ in.	10 15 0
⅜ in.	11 0 0	⅞ in. to 2½ in.	10 10 0

WROUGHT-IRON TUBES AND FITTINGS—

(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward, if sent from London Stocks.)

	Standard Wrot. Mild Steel Tubes and Tubulars Sizes ⅛in. to 6in.	Genuine Wrot. (Puddled) Iron Tubes and Tubulars Sizes ⅛in. to 6in.	Standard Fittings Sizes ⅛in. to 6in.	Standard Flanges Sizes ⅛in. to 6in.
	%	%	%	%
Gas	65	52½	57½	70
Water	61½	48½	52½	65
Steam	57½	45	47½	60
Galv. gas	52½	40	47½	60
Galv. water	47½	35	42½	55
Galv. steam	42½	30	37½	50

C.I. HALF-ROUND GUTTERS—London Prices ex Works. Per yd. in 6 ft. lengths.

	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	11d.	1/5	5d.
3½ in.	11½d.	1/7	5d.
4 in.	1/-½	1/9	5d.
4½ in.	1/1½	2/-	6d.
5 in.	1/5	2/2	8d.
O.G. GUTTERS.			
3 in.	1/1	1/11	5d.
3½ in.	1/2	1/11	5d.
4 in.	1/2½	2/-	5d.
4½ in.	1/4	2/4	6d.
5 in.	1/6½	2/8	8d.

RAIN WATER PIPES, &c.

Per yd. in 6 fts.	Pipe.	Bends, stock Branches, angles, stock angles
2 in.	1/3½	1/9 2/7
2½ in.	1/4½	2/- 3/1
3 in.	1/8½	2/6 3/9
3½ in.	2/1½	3/- 4/4
4 in.	2/5	3/7 5/3

Connections—50 per cent. off above prices.

Tonnage allowance—4 ton lots, 5 per cent.
2 ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES—London Prices ex Works.

	Pipe, angles, stock angles.	Bends, stock Branches.
	s. d.	s. d. s. d.
2 in. per yd. in 6 fts.	1 11	1 6½ 1 10½
2½ in. "	2 3½	1 8½ 2 4
3 in. "	2 4½	1 10½ 2 9½
3½ in. "	2 7	2 4 3 3
4 in. "	2 11	2 7½ 3 9

L.C.C. COATED DRAIN PIPES—London Prices ex Works.

	Pipe, angles, stock angles.	Bends, stock Branches.
	s. d.	s. d. s. d.
3 in. per yd. in 9 ft. lengths	3 4	4 3 6 8
cwt. qr. lbs.		
4 in. " 1 1 20	4 7	5 2 8 10
5 in. " 1 2 22	6 0	9 0 14 3
6 in. " 2 0 6	6 8	10 11 18 1

Gaskin for jointing 41/- per cwt.

	Per ton in London. £ s. d.		£ s. d.
IRON—			
Common bars	10 10 0	to	11 0 0
Staffordshire Crown Bars— Good merchant quality	10 15 0	to	11 10 0
Staffordshire Marked Bars	14 0 0	...	15 0 0
Mild Steel Bars	9 10 0	...	10 0 0
Steel Bars, Ferro-Concrete quality, basis price	8 0 0	...	9 0 0
Hoop iron, basis price	11 0 0	...	12 0 0
" Galvanised	27 0 0	...	28 0 0
Soft Steel Sheets, Black—			
Ordinary sizes, to 20 g.	11 0 0	...	11 10 0
" " " 24 g.	12 0 0	...	13 0 0
" " " 26 g.	14 0 0	...	15 0 0
Sheets Flat Best Soft Steel, C.R. and C.A. quality—			
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	13 10 0	...	14 15 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	14 10 0	...	15 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g.	17 10 0	...	18 10 0

No. 1 quality £4 per ton extra.

Flat and Galvanised Corrugated Sheets—			
Ordinary sizes, 6 ft. to 9 ft. to 20 g.	13 0 0	...	14 0 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	14 10 0	...	15 10 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	16 10 0	...	17 10 0
Sheets Galvanised Flat, Best quality—			
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	18 0 0	...	19 0 0
Best Soft Steel Sheets, 22 g. and 24 g.	20 0 0	...	22 0 0
Best Soft Steel Sheets, 26 g.	21 10 0	...	23 0 0
Cut Nails, 3 in. to 6 in.	15 0 0	...	16 0 0

(Under 3 in. usual trade extras.)

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

COPPER.

	s. d.
Seamless Copper tubes (basis per lb.	0 9½
Strong sheet "	0 10
Thin "	0 11
Copper nails "	1 0
Copper wire "	0 11

PLUMBERS' BRASS WORK.

Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
29/-	45/-	76/-	153/-	246/-	510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
41/6	62/-	92/-	174/-	300/-	588/- per doz.

RIVER PATTERN SCREW DOWN MAIN FERRULES.

½ in.	¾ in.	1 in.
30/6	60/-	116/6 per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
7/6	10/-	14/-	23/-	30/-	42/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
7/6	11/-	17/-	29/-	36/-	63/- per doz.

BRASS SLEEVES.

1½ in.	2 in.	3 in.	3½ in.	4 in.
10/-	12/-	20/-	24/-	31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES S.F

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
35/-	56/-	98/-	162/-	228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH BRASS CLEANING SCREW.

	1½ in.	1½ in.	2 in.	3 in.
8 lbs. P. traps	33/-	41/-	56/-	101/- per doz.
8 lbs. S. traps	35/-	45/-	66/-	126/- "

TIN.—English Ingots, 1/7 per lb. SOLDER.—Plumber's 9d., Tinmen's 10d., Blowpipe 11d. per lb.

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS—(*cont.*)

LEAD, &c.

(Delivered in London.)

	£ s. d.
LEAD—Sheet, English, 4 lb. and up	19 10 0
Pipe in coils	20 0 0
Soil pipe	23 0 0
Compo pipe	23 10 0

NOTE.—Country delivery, 20s. per ton extra: lots under 3 cwt. 3s. per cwt. extra, and over 3 cwt. and under 5 cwt., 1s. 6d. per cwt. extra. Cut to sizes 5s. cwt. extra.

Old lead, ex London area, at Mills ..... per ton £9 0 0

PAINTS, &c.

		£ s. d.
Raw Linseed Oil, in pipes	per gallon	0 1 9
" " " in barrels	"	0 1 11
" " " in drums	"	0 2 2
Boiled " " in barrels	"	0 2 3
" " in drums	"	0 2 5
Turpentine in barrels	"	0 5 0
" in drums (10 galls.)	"	0 5 2
Genuine Ground English White Lead, per ton (In not less than 5-cwt. casks.)		45 0 0

Extra for 1-cwt. kegs over 5-cwt. casks is 5/9 cwt.

GENUINE WHITE LEAD PAINT.

"Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganawyte," "Polacco," "J" Brand, and other best brands (in 14-lb. tins) not less than 5 cwt. lots. per ton delivered £ s. d. 63 0 0

Red Lead, Dry (packages extra)	per ton	24 0 0
Best Linseed Oil Putty	per cwt.	0 13 6
Size. XD quality	fkn.	0 3 0

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

Per ft.		Per ft.
15 oz. fourths ... 2½d.	32 oz. fourths	7½d.
15 " thirds ... 3½d.	32 " thirds	9½d.
21 " fourths ... 3½d.	Obscured Sheet, 15 oz.	3½d.
21 " thirds ... 4½d.	" " 21 oz.	4½d.
26 " fourths ... 4½d.	Fluted, 15 oz. 7d., 21 oz.	9½d.
26 " thirds ... 7½d.	Em'lled, 15 oz. 4½d., 21 oz.	6d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED plate in CRATES OF STOCK SIZES. Per ft.

Rolled plate	4½d.
Rough rolled	5½d.
Rough rolled	5½d.
Figured Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish White	5½d.
Ditto, tinted	6d.
Rolled Sheet	4½d.
White Rolled Cathedral	4½d.
Tinted do.	6½d.

Cast plate is same price as rough rolled.

"VITA" GLASS.	Per foot. s. d.
Clear sheet—not exceeding 1 foot	1 0
Do. do. 2 feet	1 3
Do. over 2 feet	1 9
Polished plate—not exceeding 1 foot	1 6
Do. not exceeding 2 feet	3 0
Cathedral—not exceeding 1 foot	1 0
Do. larger sizes	1 6
Horticultural Sheet and Cathedral "Vita" Glass. Sizes up to 24 inches by 18 inches or not exceeding 3 feet	1 0
3/16 in. Wired Georgian Design. Sizes up to 108 inches long by up to 24 inches wide	2 6

VARNISHES, &c.

		Per Gallon. £ s. d.
Oak Varnish	Outside	0 14 0
Fine ditto	ditto	0 16 0
Fine Copal	ditto	0 18 0
Pale Copal	ditto	1 0 0
Pale Opal Carriage	ditto	1 4 0
Best ditto	ditto	1 12 0
Floor Varnish	Inside	0 18 0
Fine Pale Paper	ditto	0 18 0
Fine Copal Cabinet	ditto	1 2 0
Fine Copal Flatting	ditto	1 0 0
Hard Drying Oak	ditto	0 18 6
Fine Hard Drying Oak	ditto	0 19 6
Fine Copal Varnish	ditto	1 0 0
Pale ditto	ditto	1 12 6
Best ditto	ditto	1 2 6
Best Japan Gold Size		0 12 0
Best Black Japan		0 10 0
Oak and Mahogany Stain (water)		0 12 6
Brunswick Black		0 7 0
Berlin Black		0 14 0
Knotting (patent)		1 5 0
French and Brush Polish		0 17 0
Liquid Dryers in Terebene		0 9 0
Cuirass Black Enamel		0 7 0

The Tongland Dam, Galloway.

A contract for the construction of the Tongland Dam, an important portion of the Galloway hydro-electric power scheme, has been placed with Messrs. John Howard and Co., of Poole, Dorset, whose tender amounted to approximately £100,000. The contract provides for the construction of an arch-type dam, in reinforced concrete, about 950 ft. long, with a concrete-lined tunnel approximately 500 ft. in length, with intake, fish-ladder, etc. Plans have been prepared by Sir Alexander Gibb and Partners, Queen Anne's Lodge, Broadway, Westminster, S.W.1, consulting engineers to the promoters, the Galloway Power Co., Ltd., Queen's House, Kingsway, W.C.2.

PATENTS

APPLICATIONS PUBLISHED.

373,132.—S. M. Dixon: Wood-paving blocks.

373,224.—E. H. Staples: Automatic gate and door-opening apparatus.

373,264.—L. F. Ludowici and C. Ludowici: Roofing tiles.

373,285.—Crittall Manufacturing Co., Ltd., and F. P. Walker: Sliding windows.

373,306.—E. D. Sadler: Lavatory wash-basins.

373,317.—D. McLean: Means of central heating for houses and other buildings.

373,364.—A. W. Masterman: Domestic fire-grates.

373,381.—Aerodynamique Industrielle: Protecting devices against draught and weather.

373,385.—C. H. Kempton and W. Bissell: Gas fires.

373,396.—H. H. Berry: Trivets for electric and gas fires.

373,403.—Coventry Automatic Telephones, Ltd., and W. Cornell: Travelling ladders.

373,419.—R. Bennet: Gas fires.

373,448.—E. R. Harrap and G. Latham: Composite tiles.

373,484.—A. Sanderson & Sons, Ltd., and H. L. Williams: Apparatus for stripping paper, paint, distemper, or the like, from walls, ceiling, or other surfaces.

373,485.—Radiation, Ltd., and H. J. Yates: Water-heating apparatus.

373,495.—R. Stickdorn: Flushing apparatus.

373,555.—A. Herman: Sliding-sash window.

373,367.—J. E. Bramwell: Closets.

Note.—Period for opposition expires August 1, 1932.

NEW COMPANIES

THE particulars quoted below have been compiled by Messrs. Jordan & Sons, Ltd., Company Registration Agents, of 116 and 117, Chancery-lane, W.C.2, from the documents available at the Companies' Registry.

MARSH & SINCLAIR, LTD. (266,160). Registered June 13. Builders and contractors, etc. Nominal capital, £500. J. Marsh, 39, Kelvingrove, Princes Park, Liverpool.

G. H. ROBINSON & SON, LTD. (266,226). Registered June 16. Hot water and sanitary engineers. At Bridge-street, Derby. Nominal capital, £8,000.

STANLEY DALE & SONS, LTD. (266,244). Registered June 16. 113, London-road, Mitcham. Builders, house decorators, etc. Nominal capital, £2,050

THOMAS & WILSON, LTD. (266,246). Registered June 16. 454a, Fulham-road, S.W.6. Plasterers. Nominal capital, £5,000.

KING, CREER & Co., LTD. (266,311). Registered June 18. Building, engineering, contracting, manufacturing, commercial, financial and developing association, etc. Nominal capital, £600. S. H. King, 32, Cavendish-avenue, New Malden.

NEW BUILDINGS IN SCOTLAND

Cupar.—HOUSING.—The Fife Public Health Committee decided to recommend the erection of 60 houses between Oakley and Comrie villages in West Fife.

Dunfermline.—SCHOOL.—E.C. of the Fife C.C. estimate the proposed new High School at £97,822.

Edinburgh.—HOUSING.—The Burgh Engineer is preparing a scheme of town planning in the Cramond area. The following warrants were granted by the Dean of Guild Court:—City—four houses at Gogarburn Mental Institution; City—house for medical officer at Gogarburn Mental Institution; C. M'Kendrick—seven bungalows at Craraeavenue; James Miller—interim warrant for nine houses at Craiglockhart-road and Craiglockhart-gardens.

Fraserburgh.—HOUSING.—The T.C. are considering a recommendation of the Housing Committee for the erection of 16 blocks of municipal houses at the Gallowhill area.

Glasgow.—BUILDING.—The Glasgow Dean of Guild Court has granted the following:—Additions and alterations to property in Firhill-road by the Firhill Greyhound Racing Co., Ltd., and a new pavilion will be erected by Benburb Football Club at Shieldhall-road and Craigton-road; new garage on the north side of Wemyss-street, between Hope-street and Stow-street, for John Paterson (Motors), Ltd., 252, Hope-street; Corporation of Glasgow, Education Department—temporary school at Crebar-street, Carnwadric; and to erect additional classrooms at St. Patrick's R.C. school, Bishop-street; and the Housing Department—dwelling-houses, 30 of two apartments, 96 of three apartments, and 38 of four apartments, at South Chester-street.

St. Andrews.—HOUSING.—The Town Council are inviting offers for the erection of 40 three-apartment houses and six four-apartment houses at Kinnessburn-road, St. Andrews. Messrs. Walker and Pride, Church-square, are the architects.

L.M.B. Sports Association.

We give below results and tables in connection with the Cricket League of this Association up to Saturday, July 9:—

RESULTS.

Broadmead	136	*v.* Minter	106.
Trocoll	54	*v.* Farmiloe	81.

DIVISION A.

	P.	W.	D.	L.	Pts.
Broadmead	5	5	—	—	10
Holloways	6	3	1	2	7
Minter	5	3	1	1	7
Higgs	5	1	—	4	2
Limmer	5	—	—	5	0
DIVISION B.					
Farmiloe	3	3	—	—	6
Downs	2	2	—	—	4
Parkonians	2	—	—	2	0
Trocoll	3	—	—	3	0

BUILDING TRADE WAGES IN SCOTLAND*

Following are grade rates authorised by the Scottish N.J.C. for Building Industry. The bricklayers in the Glasgow district have ½d. per hour extra. It should be noted that plasterers and painters who are not parties to the Scottish N.J.C. pay higher wages of 1d. and ½d. per hour extra respectively. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classifications ...	A	A¹	A²	A³	B	B¹	B²	B³
Craftsmen	1/6½	1/6	1/5½	1/5	1/4½	1/4	1/3½	1/3
Labourers	1/2	1/1½	1/1½	1/0½	1/0½	1/-	/11½	/11½

Aberdeen	A	Dundee	A	Hawick	A²	Perth	A
Airdrie	A	Dunfermline	A	Helensburgh	A	Perthshire	A³
Alexandria	A	Dunoon	A	Inverness	B	Peterhead	A³
Arbroath	A³	East Lothian	A	Kilmarnock	A	Renfrewshire	A
Ayrshire	A	Edinburgh	A	Kincardineshire	A³	Rothesay	A
Batngate	A	Falkirk	A	Kinross-shire	A	Roxburghshire	A³
Bo'ness	A	Forfarshire	A³	Kirkcaldy	A	St. Andrews	A
Broughty Ferry	A	Fort William	A	Lanarkshire	A	Selkirkshire	A³
Clackmannanshire	A	Galashiels	A³	Leith	A	Stirling	A
Coatbridge	A	Glasgow	A	Midlothian	A	Stirlingshire, West	A³
Dumbartonshire	A	Greenock	A	Motherwell	A	West Lothian	A
Dumfries	A³	Hamilton	A	Peebleshire	A³	Wishaw	A
Dumfriesshire	A³						

* The information given in this table is copyright. The rates of wages in various towns in England and Wales are given on page 109.

CURRENT PRICES FOR BUILDING WORK IN LONDON*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	9	9
Add if in clay	„ „	1	0
Add for every additional depth of 6 ft.	„ „	0	6
Planking and strutting to trenches	per foot super	0	4
Do. to sides of excavation, including shoring	„ „	1	0

CONCRETOR.

Portland cement concrete in foundation 1 to 6	per yard cube	27	0
Add if in underpinning in short lengths	„ „	6	0
Add if in floors 6 in. thick	„ „	2	6
Add if in beams	„ „	3	0
Add if aggregate 1 : 2 : 4	„ „	10	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	„ „	2	0

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	30	0	0
Add if in stocks	„	7	10	0
Add if in Staffordshire blues	„	22	0	0
Add if in Portland cement and sand	„	1	5	0

FACINGS.

Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1½

POINTING.

Neat flat struck or weathered joint	„ „	0	0	3

ARCHES.

Extra only to the price of ordinary brickwork :—				
Fair external in half brick rings	„ „	0	0	10
Axed in stocks	„ „	0	0	9
Rubbed and gauged jointed in putty camber or segmental	„ „	0	6	0

SUNDRIES.

Damp course in double course of slates breaking joint and bedded in Portland cement	„ „	0	1	0
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks		4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard super	4	6
Three-quarter-inch vertical damp course	„ „	9	6
Three-quarter-inch on flats in two thicknesses	„ „	6	0
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	„ „	1	0

MASON.

York stone templates fixed	per foot cube	13	0
York stone sills fixed	„ „	22	0
Bath stone and all labour fixed	„ „	10	6
Beer stone and all labour fixed	„ „	15	0
Portland stone fixed	„ „	20	0
Chilmark stone fixed complete	„ „	17	6

SLATER.

Welsh 16in. × 8 in. 3 in. lap, including nails	per square	72	9
Do. 20in. × 10 in. Do. Do.	„	80	9
Do. 24in. × 12in. Do. Do.	„	90	0

CARPENTER AND JOINER.

Fir framed in plates	per foot cube	4	3
Do. joists	„ „	4	9
Do. roofs, floors and partitions	„ „	5	3
Do. trusses	„ „	7	9

		¾″	1″	1¼″	2″
Deal rough close boarding	per sq.	33/6	38/-	43/-	70/-
Flat centering for concrete floor, including struts or hangers	„				50 0
Do. to beams	per ft. sup.				0 9
Centre for arches	„				1 6
Gutter boards and bearers	„				1 0

FLOORING.

		¾″	1″	1¼″	1½″
Deal-edges shot	per sq.	—	42/6	50/-	57/6
Do. tongued and grooved	„	—	47/-	56/-	64/-
Do. matchings	„	44/-	49/-	—	—
Moulded skirting, including backings and grounds	per ft. sup.	1/6	1/9	2/-	2/6

SASHES AND FRAMES.

		s.	d.
One-and-a-half moulded sashes or casements	per foot super	1	10
Two Do. Do. Do.	„ „	2	1
Add for fitting and fixing	„ „	0	3
Deal-cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights; average size		3	9

DOORS.

		1¼″	1½″	2″
Two-panel square framed	per ft. sup.	2/1	2/3	2/5
Four-panel Do.	„	2/4	2/6	2/9
Two-panel moulded both sides	„	2/6	2/9	2/11
Four-panel Do. Do.	„	2/9	2/11	3/2

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	14	0

		1″	1¼″	1½″
Plain deal jamb linings framed	per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers	„	1/4	1/6	1/9
Add if cross-tongued	„	2d.	2d.	2d.

STAIRCASES.

		1″	1¼″	1¼″	2″	2½″
Deal treads and risers in and including rough brackets		2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed		1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. x 1¼ in	per ft. run	0	9
Mahogany handrail, average, 3 in. x 3 in.	„ „	6	0
Add if ramped	„ „	12	0
Add if wreathed	„ „	24	0

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/-
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and	
Casement stays	1/2	making good	19/-
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	15	3
Plain compound girders	„	18	0
Do. stanchions	„	20	9
In roofwork	„	26	6

RAIN-WATER GOODS.

		3″	4″	5″	6″
Half-round plain rebated joints	ft. run	1/4	1/7	1/9	2/-
Ogee Do. Do.	„	1/6	1/9	2/3	2/9
Rain-water pipes with ears	„	1/6	2/4	—	—
Extra for shoes and bends	each	3/4	4/11	—	—
Do. stopped ends	„	1/6	1/10	2/9	3/3
Do. nozzles for inlets	„	2/2	2/7	3/10	4/3

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	40	0
Do. Do. flats	„	39	0
Extra labour and solder in coated cesspools	each	6	9
Welt joint	per ft. run	0	6
Soldered seam	„ „	1	3
Copper nailing	„ „	0	3

		½″	¾″	1″	1½″	2″	4″
Drawn lead waste	per ft. run	1/1	1/7	1/10	3/-	3/6	—
Do. service	„	1/6	2/-	2/5	3/6	—	—
Do. soil	„	—	—	—	—	—	6/-
Bends in lead pipe	each	—	—	—	—	3/-	6/6
Soldered stop ends	„	1/-	1/4	1/9	2/6	3/2	—
Red lead joints	„	11d.	1/-	1/3	1/11	2/4	4/10
Wiped soldered joints	„	2/6	3/-	3/6	4/4	5/6	7/9
Lead traps and cleaning screws	„	—	—	—	12/7	17/6	—
Bib cocks and joints	„	6/4	9/7	15/4	41/-	—	—
Stop cocks and joints	„	15/4	17/2	25/8	64/-	—	—

PLASTERER.

			s.	d.
Render, float and set in lime and hair	per yard sup.		2	3
Do. Do. Sirapite	„	„	2	6
Do. Do. Keen's	„	„	3	6
Add saw lathing	„	„	1	7
Add metal lathing	„	„	2	6
(Not including hangers or runners, etc., for suspended ceilings.)				
Portland cement screed	„	„	2	2
Do. plain face	„	„	3	3
Mouldings in plaster	per 1 girth		0	1
One-and-a-half granolithic pavings	per yard sup.		5	3½

GLAZIER.

21-oz. sheet plain	per foot sup.	0	7½
26-oz. Do.	„ „	0	10
Obscured sheet	„ „	1	1
⅛-in. rolled plate	„ „	0	9
¼-in. rough rolled or cast plate	„ „	0	10
¼-in. wired cast plate	„ „	1	3

PAINTER.

Preparing, and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	„ „	0	7
Plain painting, 1 coat	„ „	0	9
Do. 2 coats	„ „	1	2
Do. 3 coats	„ „	1	9
Do. 4 coats	„ „	2	4
Graining	„ „	2	3
Varnishing twice	„ „	1	9
Sizing	„ „	0	3
Flatting	„ „	0	7
Enamel	„ „	1	1
Wax polishing	per foot sup.	0	6
French polishing	„ „	1	2
Preparing for and hanging paper	per piece, 2/- to 4/-		

*These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10% on the prime cost without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Act, and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

TRADE NEWS

Scott's New Cocktail Bar.

Messrs. Rice and Son, Ltd., 15, Stockwell-road, S.W.9, were the contractors for the new cocktail bar at Scott's Restaurant, Coventry-street, W.1. We are informed by them that they carried out the whole of the constructional work.

A New Architectural Metal.

In referring to a new architectural metal, which Messrs. Parker, Winder and Achurch, Ltd., have put on the market, we regret that the name was incorrectly spelt. The metal is "Alminax"—and details are obtainable from Broad-street, Birmingham.

Bitumen Damp Courses.

Everseal Products, Ltd., manufacturers of Everseal bitumen compounds for damp courses, waterproofing, roofing, etc., have obtained registration in the United Kingdom for their trade mark "Everseal." All inquiries regarding these products should be addressed to their head office, 12, The Colonnade, Victoria House, Southampton-row, W.C.1, or to their authorised agents.

"Shutters in Industry."

Under this title, Messrs. Haskins, St. John-street, E.C.1, have issued a folder in which are illustrated the various applications of their rolling shutters. Some of the typical uses shown are for car sheds on railways, generating stations, garage and tramway sheds, etc. Special designs to meet extraordinary problems are manufactured. The whole process of working is graphically shown, and special features of smooth running and balance and operation without obstruction over a minimum of floor space are made clear. The leaflet is obtainable upon request.

The "Daily Express" Building: Heating and Ventilation.

The new "Daily Express" building, which we illustrate this week, contains some remarkable features internally, in addition to the already much-discussed outward appearance. One of these is the absence of pipes and visible heating apparatus. The entire building is panel-warmed with low pressure panels embedded in the ceilings on each floor. Something like eight miles of special "panel" tubing run through the building for the panels, which are designed to keep a constant temperature of 70 deg. F. in the composing and machine rooms, and in the publishing department. The fixed temperature for the other rooms is 65 deg. F., and this can be maintained by the panels with the outdoor temperature as low as 25 deg. F. The patent panels were built into the ceiling as each story went up, and quite early in the construction completed panels were connected up to the heating boilers in the old boiler room by an ingenious adjustment, so that the lower part of the building was warmed and dried before the upper stories were built. The only pipes to be seen in connection with the warming system are control risers, which run up each main supporting stanchion or column. The ventilation problem was an important one, and many novel arrangements have had to be incorporated. The publishing office and the upper floors are equipped with "stylovents," the new British ventilating device. In the machine room the fresh air fan duty is two and a quarter million cubic feet of air per hour, against a 1½ in. total water gauge; the extract fan has a similar duty against a 1 in. total water gauge. This gives eight changes of air an hour. The machine room air is passed over a heater before delivery, which is capable of raising it from 25 deg. F. to 75 deg. F., and a constant temperature of 70 deg. F. has to be maintained in winter in the whole room with a satisfactory degree of humidity to ensure quick drying of the ink. The air is washed in humidifiers on the roof. The patent system of panel warming and the ventilating systems were installed by Messrs. Richard Crittall and Co., Ltd., 43, Bloomsbury-square, W.C.1.

TENDERS

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modifications*.
¶ Denotes *accepted by H.M. Office of Works and H.M. War Office*.

Aberdeen.—20 houses at Cairncoy-road, and various sites at Beck Hillton-road. Mr. E. I. Williamson, architect, Union-street:

°J. Bisset & Sons, The Esplanade, Aberdeen.

¶Aldergrove.—Reconditioning quarters and mess-room at Aldergrove, N. Ireland, for H.M. Air Ministry:—

°H. & J. Martin, Ltd., Ormeau-road, Belfast.

Alfreton.—Conveniences at the Riddings Council school, for the Derbyshire E.C. Mr. G. H. Widdows, F.R.I.B.A., County Architect, County Offices, St. Mary's Gate:—

°Evans Bros. & Co., Alfreton.

Ascot.—Shops with living accommodation.

°Norris & Co., Sunningdale, Ascot.

Atherton.—56 non-parlour type houses on the Hag Fold estate, for the U.D.C. Mr. F. L. Boydell, surveyor:—

°G. & J. Seddon, Little Hulton, near Farnworth.

Ayr.—Reconstruction and extension of the premises of Mr. W. C. Galbraith, High-street. Messrs. J. & J. Eaglesham, architects, Cathcart-street:—

°W. Paton & Sons., Ltd., Kyle-street, Ayr.

Barnsley.—Extensions to the Kendray Hospital in Doncaster-road, for the Governors:—

°W. Johnson & Sons.

Barnsley.—Pit-head baths at the Barrow Colliery, for the Barrow Colliery Co., Ltd., and the Mines Department:—

°R. Walker & Sons, Ltd.

Barnstaple.—Six non-parlour type houses at Bickington, Fremington, for the R.D.C. Mr. Harold Hargreaves, Building Surveyor, The Red House, Castle-street:—

°Wm. Isaac & Sons, Ltd., Wrafton-road, Braunton £1,945

Barwell.—Shops and offices, for the Barwell Co-operative Society:—

°W. Moss & Son £6,570

Bedlington.—Further 60 houses at Stakeford, for the U.D.C.:—

°G. Towers, 77, Union-street, Blyth ... £14,341

Belturbet.—Steel water tank and foundation work, for the U.D.C.:—

°Mothergill Bridge & Engineering Co., Ltd. £822

Birmingham.—Extensions to the business premises in Bordesley-street, for Messrs. Ty-Phoo Tea, Ltd. Mr. H. W. Weedon, architect, 84, Colmore-row:—

°Maddocks & Walford, Tyburn-road, Erdington, Birmingham.

Birmingham.—Extensions at the corner of Summer-lane and Brearley-street, Aston, for Messrs. Newey Bros., Ltd. Mr. A. J. Archer, architect and surveyor, 11, Waterloo-street:—

°W. C. Skinner, Birchfield-road, Birmingham.

Birmingham.—Extensions to the Sunday school at Blackheath, for the Birmingham-road United Methodist Church. Messrs. Joynson & Sons, architects and surveyors, Lower High-street, Wednesbury:—

°J. Dallow & Sons, Blackheath.

Blackpool.—Certain structural alterations at the Public Health Offices, for the C.B.:—

°Pickover & Sykes, Hollywood-avenue, Blackpool.

Blackpool.—74 houses on the Highfield-road housing site, together with fencing and gates in connection therewith, for the C.B. Borough Surveyor:—

°A. Threlfall, Farrington Sawmills, Leyland.

Blackpool.—Transformer house in Weymouth-avenue, for the C.B.:—

°Hogarth & Pollard, Ltd.

Blackpool.—Painting various buildings, for the C.B.:—

Central police buildings, Albert-road offices, and inspectors' quarters—°Dodd & Jones.
Bispham police station; Hawes Side-lane police station; Talbot-road police station—°H. Towers.
Fire Station and officers' quarters, and firemen's quarters; weights and measures offices and police messroom—°J. Rodgers.

Blackpool.—External painting of premises 106, George-street, for the C.B.:—

°Joseph Rodgers.

Bo'ness.—Pithead baths, canteen and ambulance rooms at Kinniel Colliery. Miners Welfare Architectural Staff, Westminster, London, S.W.:—

°McLean & Co., Glasgow-road, Wishaw, Motherwell.

Boston.—Extensions of buildings including laundry and heating apparatus, for the Fever Hospital Joint Committee. Mr. G. D. Cockrill, Borough Surveyor:—

°W. J. & H. H. Vamplew, Boston £9,797

Bury.—Additions to St. Mary's Home in Duke-street, for the Corporation. Mr. R. Moore, Town Clerk:—

°W. & F. Riley, Rake-street, Bury.

Cambusbarn.—22 houses, for the Stirlingshire C.C. Messrs. Tattock & Thomson, architects, Stirling:—

Excavation, brick and mason — °Conoboy & O'Brien, Wallace-street, Stirling.
Slater work and roughcasting—°D. Robertson and Son, Denny.
Plaster—°A. Walls, Thistle-street, Stirling.
Joinery, carpentry, ironmongery and glazing—°W. Somers & Sons, Port-street, Stirling.
Plumber—°J. Graham, Denny.

Cardiff.—Laundry block at Llandough Hospital, for the T.C.:—

°P. L. Jeans, Cardiff £5,942 12 9

Cardiff.—Flour mills on a new deep water site at Roath Dock, for Messrs. Spillers, Ltd., 40, St. Mary Axe, London, E.C.3. Messrs. John Clarke & Son, F. & L.R.I.B.A., architects, 3, Romford-place, Liverpool. Consulting Engineer, Dr. Oscar Faber, D.Sc., 37, Duke-street, Oxford-street, W.1:—

Builders—°H. Willcock & Co., Ltd., Wolverhampton.
Steelwork—°Redpath Brown & Co., Ltd., London, W.C.2.

Cheadle.—Electricity sub-station in Cherrington-road, for the U.D.C. Mr. J. Wrest, engineer and surveyor:—

°Oldham & Hallworth, Hazel Grove.

Chester-le-Street.—Rebuilding of the premises destroyed by fire. Plans by the C.W.S. Architects' Dept., 90, Westmorland-road, Newcastle:—

°C.W.S. Building Dept., West Blandford-street, Newcastle-on-Tyne.

Chesterfield.—Adaptation of Thornfield House, for the Transport Committee:—

Builders—°C. E. Gaunt, Ltd.
Painting and decorating—°H. E. Berresford
(Both of Chesterfield.)

Chesterfield.—Twenty houses at Brimington, for the R.D.C. Messrs. Houlton & Kington, chartered architects, Market-place:—

°Walters & Westley, Ltd., Marshall-road, Woodseats, Sheffield £6,240

Choppington.—Completing the parish hall scheme at St. Paul's Church:—

°Waugh & Robertson.

Chopwell.—Hall, for the Derwent Lodge of Freemasons. Mr. W. Crooks, architect, 42, Tyne-street, Blaydon:—

°—Stoddard, Rowlands Gill.

Chorley.—Outside painting of 53 houses on the Crescent housing site, for the T.C. Town Clerk:—

°T. Calderbank, Alfred's-court, Chorley.
°Hy. Nightingale & Son, 7, Clifford-street, Chorley.

Chorley.—Internal decorations at the grammar school and technical institute, for the Corporation. Mr. R. L. Roby, Education Office:—

°Hy. Nightingale & Son, Clifford-street, Chorley.

Clarkston.—15 houses near the Old Manor-road:—

°D. C. Maitland, 1442, Dumbarton-road, Scotstoun, Glasgow

Crymmych.—New elementary school buildings for 85 pupils, for the Pembrokeshire E.C. Mr. O. T. Thomas, L.R.I.B.A., County Architect, Haverfordwest:—

Powell & Richards, Newcastle Emlyn	£6,294
Weaver Bros., Swansea	4,544
W. Waters & Son, Kilgetty, Pem.	4,250
D. Davies & Son, Cardiff	3,990
S. G. Thomas & Son, Pembroke	3,750
T. Michael & Son, Kilgerran, Pem.	3,460
John Morgan, Neath	3,236
†W. J. Lewis, Rope Yard-hill, Cardigan	3,184

Dundalk.—70 houses of concrete block type, for the U.D.C.:—

*McDonald & Son £25,464

Dundalk.—12 houses in Culhane-street, for the U.D.C.:—

*McDonald & Son £3,661

Dundee.—Wood carver for screening chambers at No. 3 pumping station, Eastern Wharf, Carolina Port, for the Corporation. Town Clerk:—

*Yorkshire Hennibique Contracting Co., Dundee £368 17

East Grinstead.—Construction at Eden Vale sewage disposal works of percolating filter, storm water tanks, sludge filters and alterations to existing sedimentation tanks, together with pipe lines, manholes and contingent materials and works, for the U.D.C. Mr. R. Campbell Golding, engineer and surveyor. Quantities by the engineer and surveyor:—

*The Durnford Construction Co. (Bristol), Ltd., Imperial House, 80-86, Regent-street, London, W.1.

Edinburgh.—28 dwelling houses at Craigleith-avenue and Craigleith-crescent:—

*J. Miller, Miller-place, Edinburgh.

Fareham.—Alterations to Westbury Manor, for the U.D.C. Mr. H. T. Privett, surveyor:—

*G. Riches, 215, West-street, Fareham £1,348 8

Garstang.—Branch bank at Garstang, near Preston, for the District Bank, Ltd., 15, Spring-gardens, Manchester. Messrs. Francis Jones and H. A. Dalrymple, F. & A.R.I.B.A., architects, 178 and 180, Oxford-road, Manchester:—

*T. Croft & Sons, Ltd., Preston.

Glasgow.—Electrical installation at Riverside school. Mr. W. McCaig, F.R.I.B.A., Education Architect, Bath-street:—

*J. B. & J. A. Mathieson, 170, Trongate, Glasgow.

Glasgow.—Fifteen houses, at Elmwood-avenue, Broomhill:—

*P. T. Wilson & Son, Half Way, Paisley-road, Cardonald.

Glasgow.—Houses on new road, Broomhill-drive, Jordon Hill. Mr. John S. Boyd, architect, 79, West Regent-street:—

*W. S. Gordon & Co., 104, Crow-road, Partick, Glasgow.

Golspie.—Ten houses at Golspie, for the Sutherland C.C.:—

	Per block.
Mason work—	
*R. Moore, Golspie—	
3-apartment houses	£235 1 2
4- ,, ,,	260 5 10
Joiner work—	
*H. Macrae & Son, Beauly—	
3-apartment houses	182 19 8
4- ,, ,,	190 15 1
Slater work—	
*Taylor & Son, Inverness—	
3-apartment houses	87 19 6
4- ,, ,,	108 11 4
Plaster work—	
*A. Maclean & Son, Dornoch—	
3-apartment houses	89 2 6
4- ,, ,,	94 12 0
Painter work—	
*A. Watson, Golspie—	
3-apartment houses	26 10 10
4- ,, ,,	29 8 0
Plumber, water, drainage and sewer work—	
*Alex. Sutherland, Duke-street, Golspie—	
For entire work	646 18 3
Fencing and gates—	
*Alexander Mackay, 11, Church-street, Golspie—	
For entire work	84 17 2

Groomsport.—Additions to Groomsport Parish Church, Co. Down. Mr. J. A. Hanna architect, Prudential-buildings, 3, Wellington-place, Belfast. Quantities by Messrs. R. B. Roe & Sons, 17, Wellington-place, Belfast:—

J. Gillespie	£2,170
James Smith, Newtownards	2,080
Courtney & Co.	2,077
McDowell & Fitzsimons, Ltd., Lingan	2,060
Thornbury Bros.	2,048
Thomas May	2,015
James Henry & Son, Ltd.	2,012
Cairns Bros.	1,999
Harding & Harding	1,993
J. McClelland, Bangor	1,939
Thomas Lindsay	1,897
J. & R. Thompson, Ltd.	1,894
Thomas McKee & Sons	1,791
*Wm. Dowling, Ltd., Cromwell-road, Belfast	1,550

(Remainder of Belfast.)

Halifax.—Ten small bungalows at Sandhall-green, for the C.B. Mr. D. T. Lloyd Jones, Borough Engineer, Crossley-street:—

Mason—*E. & T. Bower, Ltd., Halifax.
Joiner—*E. Johnson, Halifax.
Plumber—*G. Crowther & Sons, Halifax.
Electrician.—J. Pilling & Co., Halifax.
Slater—*H. Nelson, Bradford.
Plasterer—*W. Tidswell & Sons, Bradford.

Hillingdon.—Erection of the Glebe House, loggia and garage, in Royal-lane, for Mr. J. Miles. Mr. Hubert F. Bateman, L.R.I.B.A., architect, Warwick-road, West Drayton, Middlesex:—

R. T. Warren, Hayes Gate	£1,954 0
E. A. Collins, Slough	1,773 10
Fassnidge & Son, Ltd., Uxbridge	1,771 3
Y. J. Lovell & Son, Gerrard's Cross	1,737 0
§W. S. Try, Cowley	1,714 15

Hollinghourn.—Two pairs of cottages at Lenham and two pairs of cottages at Harrietsham, for the R.D.C. Mr. C. W. Page, Building Surveyor, 33, Earl-street, Maidstone:—

Harrietsham—	
T. J. Swaffer, Ulcombe	£1,580 10
E. C. & S. Clark, Lenham	1,498 18
R. Lawrence & Son, Maidstone	1,498 0
H. Goodsell, Maidstone	1,358 0
J. Myers, Brixton	1,300 0
*W. Cashford & Son, Headcorn	1,298 10
Lenham—	
T. J. Swaffer, Ulcombe	1,600 0
E. C. & S. Clark, Lenham	1,541 17
R. Lawrence & Son, Maidstone	1,480 0
H. Goodsell, Maidstone	1,416 0
J. Myers, Brixton	1,300 0
*W. Cashford & Son, Headcorn	1,294 10

(Subject to M.H. approval.)

Horsforth.—Laying of a maple floor at the Mechanics' Institute, for the Council. Mr. J. E. Aldersley, surveyor, Council Offices, Horsforth:—

*Jeptha Thornton & Sons, Craghill Works, Thackley, Bradford £69 9 4

Huddersfield.—Extensions to school buildings at Crosland Hill, for the Trustees of Crosland Hill Wesleyan Church. Mr. L. Smith, architect, 9, Kirkgate-buildings.

Mason—*Wm. Mallinson & Sons.
Carpenter and joiner—*H. G. Lockwood.
Plumber and glazier—*S. Thackray.
Plasterer and slater—*Alfred Bowers Successors.
Painter—*W. & — Holroyd.
Electrician—*N. Townend.

(All of Huddersfield).

Lancashire.—For (*a*) alterations, etc., to Widnes Technical school, (*b*) erection of shower baths, etc., at Poulton Baines' Grammar school, and (*c*) unclimbable iron fence at the Playing Fields, Orrell Lamberhead Green Council school, for the E.C. Mr. Stephen Wilkinson, F.R.I.B.A., County Architect, 16, Ribblesdale-place, Preston:—

(*a*) *Builders*—	
*G. Cleaton, Widnes	£530
(*b*) *Builders*—	
*T. Croft & Sons, Ltd., Preston	323
(*c*)—	
*J. W. Daniel, Chorley	159

Lancaster.—Public conveniences in Market-square, for the T.C. Mr. F. Hill, Borough Surveyor:—

*C. Hodgson, Lancaster £1,790

Leeds.—Painting various bridges within the city, for the T.C. Mr. J. E. Acfield, City Engineer:—

*J. W. Pickles & Sons, Ossett £240 10

Leeds.—Alterations and additions at the Engineers' Club, St. Mark's-avenue, Woodhouse-lane:—

*W. T. Pearson, Ltd.

Leyland.—For (*a*) alterations to premises, (*b*) installation of heating system, and (*c*) the electric lighting, for Managers of St. Mary's (Rev. S. A. Parker, O.S.B., P.P.), Mr. G. Hughes, architect, 96, Kenilworth-road, St. Annes-on-Sea:—

(*a*)*A. Tomlinson, Leyland.
(*b*)*Mercer & Sons, Ltd., Blackburn.
(*c*) Mayor & Crozier, Preston.

Leyton.—Remodelling of latrines at Newport-road and Trumpington-road schools, for the T.C.:—

	Newport-road.	Trumpington-road.
F. J. Coxhead	£815	£1,247
H. C. Horswill, Ltd.	763	1,129
Kind & Co.	820	1,276
J. T. Luton & Son, Ltd.	727	*1,097
J. & R. Rooff, Ltd.	975	1,460
E. A. Russell, Ltd.	*687	1,250
A. E. Symes, Ltd.	749	1,291
Arthur Webb	—	1,333

Littleborough.—Eight houses at Shore, for the U.D.C. Mr. A. Travis, architect, Union Bank-chambers, King-street, Rochdale:—

*R. & T. Howarth, Rochdale.

Liverpool.—New Presbytery and outbuildings on Bebington Hill, for Rev. M. McEnroe, P.P., St. Brigid, 14, Great Nelson-street. Messrs. Weighman & Bullen, architects, 15, Tithebarn-street:—

*R. Wearing & Sons, Liverpool.

Liverpool.—Warehouse in Oakes-street and Norman-street, for the Central Equipment Co., 4, Shaw-street. Messrs. Quiggin & Gee, FF.R.I.B.A., architects, 24, North John-street:—

*W. A. Gale, Ltd., Bootle.

Llay.—Laying out and fencing of the new burial ground, for the Parochial Council:—

*Whiteley Brothers, Wrexham ... £5,733 12 9

¶**London.**—The following works contracts have been placed by the War Office during the week ended July 7:—

Bulford—erection of barrack blocks—W. E. Chivers & Sons, Ltd., Devizes.
Catterick Camp—pellett range for Royal Tank Corps—Tarran & Ayre, Hutton Rudby.
Catterick Camp (various lines)—periodical painting—T. Metcalf & Sons, Darlington.
Chatham, Kitchener Barracks—periodical painting—A. McDermott & Sons, Ltd., Bradford.
Chatham—roof repairs—A. W. Allard & Co., Ltd., London, S.W.
Chatham—repointing walls, etc.—H. Goodsell, Maidstone.
Dover—periodical painting, and Dover, Citadel Barracks—erection of dining-hall, cookhouse, etc.—G. Lewis & Sons (Dover), Ltd., Dover.
Inverness—artificers' work—H. Fraser & Son, Inverness.
Lydd—periodical painting—C. J. Else & Co., Ltd., Derby.
Spithead Sea Forts—repairs to landing stages—J. Croad, Ltd., Portsmouth.
Woolwich—nursing sisters' quarters—Anglo-Scottish Construction Co., London, S.W.

¶**London.**—Tenders accepted by H.M.O.W. for the week ended July 9:—

Edinburgh National Portrait Gallery—heating, ventilating and hot water services—J. Boyd & Sons, Ltd., McDowall-street, Paisley.
Sleaford Post Office—alterations—Bernard Pumfrey Ltd., Western Works, Carlisle-street, Gainsborough.
Kew Ministry of Labour, C. & R.O.—internal painting—George Jones & Sons, 27b, Church-street, W.8.
Plymouth Head Post Office and County Court—heating and hot water service—The Brightside Foundry & Engineering Co., Ltd., 17, Summer-row, Birmingham.
Mexborough Employment Exchange — erection—Thomson & Dixon (Doncaster), Ltd., Greenfield-lane, Balby.

Leyton.—School painting and repairs, for the T.C.:—

Contractors.	Church-rd. senior girls' dept. (intr. and extr.).	Sybourn-st. infants. dept. (intr. and extr.).	Cann Hall-rd. infants. & jr. boys. (intr. and extr.).	Newport-rd. infants. & jr. boys. (intr. and extr.). sr boys' (extr.).	Downsell-rd. school (exterior).	Harrow Green infants (interior).	St. Joseph's R.C. school (interior).	Kirkdale-rd. infants. (interior).	Knotts Green spec. (intr. and extr.).
	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.
Borough Engineer	—	—	—	—	453 11	—	—	—	—
E. Beasley, Ltd.	689 16	354 0	810 15	1,070 10	427 5	211 15	—	190 0	—
S. Blow, Ltd.	925 0	—	—	—	457 0	—	303 0	—	—
A. E. Clark	785 0	384 18	—	1,433 0	335 11	—	229 15	—	—
H. W. Christophers	—	—	—	—	—	535 5	—	—	—
W. J. Clemens	—	—	774 10	989 10	359 10	193 0	—	212 0	—
S. C. Grover	687 0	332 0	763 0	898 0	417 0	243 0	223 0	209 0	499 0
H. C. Horswill, Ltd., Forest Gate	840 0	350 0	828 6	1,200 0	400 0	234 0	220 0	*185 0	*450 0
J. T. Luton & Son, Ltd., Stratford	890 0	430 0	728 0	1,291 0	440 0	279 0	250 0	225 0	639 0
C. J. Manning, Stratford	*404 0	*249 0	—	878 0	274 0	188 0	*147 0	—	497 0
J. McKenzie, N.W.4	538 0	273 0	651 0	*782 0	364 0	*163 0	178 0	163 0	499 0
G. H. Miller & Co.	753 0	363 0	737 10	969 0	380 0	228 0	267 0	—	565 0
H. Pledger	—	—	—	—	430 0	220 0	190 0	—	—
J. Sands	940 10	408 5	—	—	—	—	—	—	—
Stoneley & Co., Forest Gate	—	396 0	*673 0	—	—	230 0	—	—	593 0
R. Woollaston & Co., Bow	—	—	840 0	—	*299 0	—	—	—	—

(All of London.)

London.—Renovating and redecorating the whole of the interior of the Royal Albert Hall, for the Royal Albert Hall Corporation.
*F. G. Minter, Ferry Works, Putney, S.W.15.

London.—Erection of Beaconsfield-road sub-station, for the Fulham B.C.:—

W. J. Marston & Son	£535 0
W. Brooks & Son	535 0
*Swan Bros., North End-road, S.W.6	464 10

(All of London.)

London.—Internal and external cleaning, painting and repairs at Western Hospital, Fulham, for the L.C.C.:—

Lilly & Sons, Ltd.	£4,977
Chas. Berger	4,642
Arthur H. Inns, Ltd.	4,407
Falkus Bros., Ltd.	4,044
Edward Proctor & Sons	3,690
F. C. Flack	3,565
Stoneley & Co.	3,500
Sykes & Son, Ltd.	3,196
C. & T. Painters, Ltd.	3,127
J. McKenzie	3,126
W. S. Lambeth	3,015
Headstone Construction Co., Ltd.	2,912
Pitts Ltd.	2,850
*Boyce & Co., 1, Barford-close, Hendon, N.W.4	2,575

(Chief Engineer's estimate: £3,570.)
(All of London.)

London.—Cleaning, painting and repairs at Dulwich Hospital, for the L.C.C.:—

R. G. Houghton	£6,984 0
Greenaway & Son	3,078 0
W. Lott & Son	2,800 0
Burnand & Pickett, Ltd., Wallington	2,772 0
J. McKenzie	2,630 0
Arthur H. Inns, Ltd.	2,627 0
P. Miller & Son, Dartford	2,580 0
Boyce & Co.	2,575 0
Chas. Berger	2,570 0
Lilly & Sons, Ltd.	2,493 0
W. S. Lambeth	2,480 0
J. Scott Fenn, Ltd.	2,467 0
T. C. Randall & Son, Ltd.	2,432 0
Edward Proctor & Son, Ltd.	2,398 0
Sykes & Son, Ltd.	2,370 0
Geo. Jones & Son	2,319 0
L. Kazak & Co.	2,285 0
*W. Bickerton, 40a, Foxberry-road, Brockley, S.E.4	2,243 10

(Chief Engineer's estimate: £3,550.)
(Remainder of London.)

London.—Adaptation of 21-27, Peckham-road for nurses' quarters, enlargement of the nurses' dining-room and provision of milk store and butcher's shop at St. Giles' Hospital, Camberwell, for the L.C.C.:—

		Empire materials.
Thomas D. Leng	£6,068	No variation
Marrable Bros.	5,960	£6,085
Cole, Loasby & Co., Ltd.	5,796	No variation
John Garrett & Son, Ltd.	5,256	,,
Galbraith Bros., Ltd.	—	£5,050
J. & C. Bowyer, Ltd.	5,036	No variation
Limpus & Son, Ltd.	5,012	£5,014
Mullen & Lumsden, Ltd.	4,973	No variation
H. H. Hollingsworth & Son	4,843	,,
Hill & Gurr	4,724	,,
Truett & Steel, Ltd.	4,722	,,
J. E. Billings & Co., Ltd.	4,630	,,
*William Downs, Ltd., 12, Hampton-street, Walworth, S.E.17	4,542	,,

(Architect's estimate: £4,897.)
(Remainder of London.)

London.—Painting and tarring works at various parks and open spaces, for the L.C.C.:—

North-west district—

King Freeman & Co., Ltd.	£6,530 0
H. Somerford & Son, Ltd.	4,587 0
W. J. Dixon & Sons	4,560 0
Whitbys, Ltd.	3,990 0
N. Harris & Sons	3,873 0
G. Butters & Sons	3,857 0
Marchant, Hirst & Co.	3,580 0
Decra, Ltd.	3,387 0
T. Brown & Son (Herne Hill), Ltd.	3,380 0
E. B. Holmes & Co., Ltd.	3,289 0
Triggs & Co.	3,244 0
*E. Proctor & Sons, Rockmount-road, Plumstead, S.E.18	2,612 0

(Chief Officer, Parks Department, estimate: £4,580.)

South-west district—

Watson & Ellwood	2,538 1
W. J. Dixon & Sons	2,050 0
W. Bickerton	2,006 0
Marchant, Hirst & Co.	1,883 0
T. Brown & Son (Herne Hill), Ltd.	1,743 0
N. Harris & Sons	1,689 15
H. Somerford & Son, Ltd.	1,656 0
Triggs & Co., Ltd.	1,445 0
*E. Proctor & Sons, Rockmount-Road, Plumstead, S.E.18	1,427 0

(Chief Officer, Parks Department, estimate: £2,300.)

South-east district—

W. J. Dixon & Sons	2,672 0
E. Proctor & Sons	2,249 0
Whitbys, Ltd.	2,205 0
H. Somerford & Son, Ltd.	2,177 16
N. Harris & Sons	1,997 0
*W. Bickerton, 40a, Foxberry-road, Brockley, S.E.4	1,985 5

(Chief Officer, Parks Department, estimate: £2,860.)
(All of London.)

London.—External and internal cleaning, painting and repairs at Grove Hospital, for the L.C.C.:—

E. Christian & A. Sinclair	£4,921
Geo. Jones & Son	4,375
Hubbard & Lilly	4,317
J. Scott Fenn, Ltd.	4,157
Chas. Berger	3,697
Edward Proctor & Sons	3,579
Sykes & Son, Ltd.	3,250
J. McKenzie	2,996
Boyce and Co.	2,950
L. Kazak & Co.	2,932
Pitts, Ltd.	2,789
Lilly & Sons	2,787
*Arthur H. Inns, Ltd., Fox-court, Holborn, E.C.1	2,754

(Chief Engineer's estimate: £4,565.)
(All of London.)

London.—Cleaning and repainting of Wandsworth bridge, for the L.C.C.:—

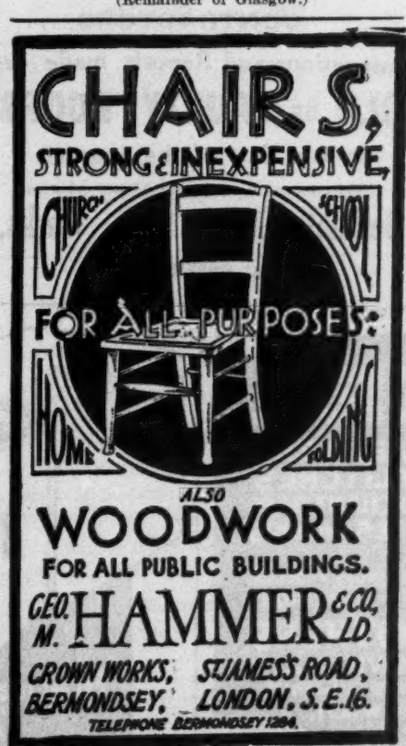
S. C. Grover	£3,058 2 6
F. S. Lee & Co., Enfield	2,500 0 0
E. J. & P. Bower, Barnet	1,881 3 6
Walter Runds	1,568 0 0
Alfred Bagnall & Sons, Ltd., Shipley	1,513 2 11
William Hogg, Ltd., Liverpool	1,435 15 0
P. G. Creed & Son, Gidea Park	1,419 4 0
Edward Proctor & Sons	1,307 19 0
S. A. Keenan, Winnersh	1,292 17 6
R. J. Butler, Newton Abbot	1,262 19 6
Decra, Ltd.	1,173 0 0
W. G. Beaumont & Son	1,124 2 4
C. and T. Painters, Ltd.	1,048 9 3
R. Skevington & Sons, Derby	999 19 0
H. Lawrence & Sons	866 6 8
‡James Robb & Son, Ltd., Glasgow	832 0 4
N. Harriss & Sons	636 11 9
Chief Engineer's estimate	1,107 10 6

(Remainder of London.)

Macclesfield.—Extensions at the vagrancy wards at the Poor Law Institution, for the Public Assistance Committee. Mr. E. Hamson, Borough Surveyor:—
*B. Smith, Stockport £2,225

Margate.—Alterations to shopfront and interior fittings at 90, High-street. Messrs. Grace & Farmer, architects:—
*Pike & Pettengell, 111-115, Hardres-street, Ramsgate.

Milngavie.—68 houses, for the Corporation. Mr. F. Preston, Burgh Architect:—
Excavation, brick and mason — *A. M. McDougall & Co., Davaar-street, Bridgeton.
Plaster—*A. McKellar, 19, Palm-street, Parliamentary.
Fencing and gates—*W. Gatrix & Sons, Walkden, near Manchester.
Plumber—*T. Porter & Son (Glasgow), Ltd., Seawood-street.
Joinery, carpentry and ironmongery—*Dougall and Co., Glasgow-road, Dumbarton.
Glazier—*K. White & Co., 766, Springburn-road, Springburn.
Painting—*P. McKerracher & Son, South Portland-street.
Cement—*Archibald McKellar, Palm-street, Parliamentary.
Slating and roughcasting—*J. Wallace & Son, Muirhead, Chryston.
Electrical installation — *McColquhoun & McArthur, 189, Albert-road, The Shields.
(Remainder of Glasgow.)



Naas.—Eight houses at Naas, Co. Kildare, for the Irish Sailors' and Soldiers' Land Trust. Mr. W. J. Brown, F.R.I.B.A., architect, 51, Upper Mount-street, Dublin:—
*L. Henly & Sons, 6 and 7, Fair-street, Drogheda £3,578 13 11

Newcastle-on-Tyne.—Rebuilding premises in Carliol-place, for Messrs. A. W. Bridge. Mr. J. N. Fatkin, architect, 77, Westgate-road:—
*A. Anderson, Sutton-street, Newcastle.

Newcastle-on-Tyne.—Conversion of "Wellburn House" into flats. Messrs. Marshall & Tweedy, architects, 129, Pilgrim-street:—
*Cussins, Ltd., St. Mary's-place, Newcastle.

Newcastle-on-Tyne.—Extension to premises, for Messrs. James. Mr. E. T. Rayne, architect, Emerson-chambers:—
*A. & J. W. Potts, St. Ann's Works, City-road, Newcastle.

Newcastle-on-Tyne.—Presbyterian Church hall at Heaton. Mr. W. W. Tasker, architect, 17, Claremont-place:—
*T. E. Ridley, 7, Moor-crescent, Gosforth, Newcastle.

Newlyn.—Lavatories at the approach to the North Pier of the Harbour, for the Newlyn Pier and Harbour Commission. Mr. J. Eddy, clerk, 5, The Green Market, Penzance:—
*J. S. Tregenza & Sons, Newlyn, Penzance £250

North Shields.—Houses and shops on the new building estate:—
W. Moore, 44, Cartingdon-road, North Shields.

Padiham.—64 non-parlour type houses, for the U.D.C. Mr. H. Russell, surveyor:—
‡Direct Labour ..... £19,000 (about)

Portsmouth.—Mild-steel fencing and gates on land at Hilsea, for the T.C. City Engineer:—

W. T. Hill	£949 16 6
Wilkes & Co., Portsmouth	564 18 0
Boulton & Paul, Ltd.	553 14 0
The Clyde Structural Iron Co., Ltd., Glasgow	539 8 0
J. Thorp & Son, Ltd., S.W.1	538 1 0
The Portsmouth Steel Co., Ltd., Portsmouth	521 9 7
J. Shervell, Ltd., Portsmouth	516 16 0
The Craig Greenhill Engineering Co., Ltd., Belfast	513 13 2
Staveleys, Ltd., Atherton, near Manchester	509 6 6
T. W. Palmer & Co.	475 4 0
Hill & Smith, Ltd., Brierley Hill, Staffs	474 0 10
W. Blacker, Stalybridge	460 5 0
A. & J. Main & Co., Ltd.	458 9 6
Wm. Hayward & Sons, Ltd., Wolverhampton	450 8 0
James Couper & Co., Ltd.	449 13 0
Thomas Bowen, Wolverhampton	428 16 3
John Elwell, Ltd., Oldbury, Birmingham	427 6 0
McKinlay & Co., Ltd., Portsmouth	420 12 3
Roberts & Co. (Wednesbury), Ltd., Wednesbury	419 12 6
Croggon & Co., Ltd.	415 19 0
Penfold Fencing, Ltd., Watford	398 3 3
W. A. Baker & Co. (1910), Ltd., Newport (Mon.)	397 6 6
W. A. Parker & Co., Workington	384 12 6
Bayliss, Jones & Bayliss, Ltd.	373 2 6
*Wm. Gratrix & Sons, Walkden	345 4 0

(Remainder of London.)

Preston.—Extensions to out-patients' department and pathological department for the Preston and County of Lancaster Queen Victoria Royal Infirmary. Mr. A. C. M. Lillie, L.R.I.B.A., architect, Bamber Bridge:—
Bricklayer—*W. Jackson.
Steelwork—*Foster Bros. & Co.
Plastering—*W. Cooke & Son, Ltd.
Stonemason—*J. E. Ratcliffe.
Tiling—*Brown & Bennett.
Plumbing and glazing—*W. Hardman & Sons.
Slating—*J. Fletcher.
Joinering—*R. Major Barton.
Asphalting—*Bolton, Hayes & Co., Ltd., Bolton.
(Remainder of Preston.)

Ramsgate.—Extension to shopfronts and interior fittings at 11 and 11a, High-street. Messrs. Grace & Farmer, architects:—
*Pike & Pettengell, 111-115, Hardres-street, Ramsgate.

Retford.—Further 54 non-parlour type houses on the Lidgett-lane estate and 12 parlour and 18 non-parlour type houses on the Hallcroft estate, for the T.C.:—
*A. Richmond & Sons, Retford £26,991

Rochdale.—Alterations at bus garage in Mellor-street, for the Corporation. Mr. S. H. Morgan, Borough Surveyor:—
*R. & T. Howarth, Rochdale.

Rowley Regis.—172 houses on the Grace Mary estate at Tividale, for the Council:—
*Alan Edwards, Ltd., Wrexham.

Sheffield.—46 houses on the Shiregreen estate (part 3, scheme 4, section 14), for the T.C. City Architect:—
*Simms, Sons & Cook, Ltd. £14,857

Sheffield.—Installation of hot water and extension of cold water services in 174 houses on the Wincobank housing estate (old portion), for the T.C. City Architect:—

*W. Malthouse, Ltd. £2,022

Sheffield.—Premises for social centre on Manor estate, for the T.C. Mr. W. G. Davies, F.R.I.B.A., City Architect:—

‡Corporation Works Department £3,628

Solva.—New elementary school buildings at Solva for 120 pupils, for the Pembrokeshire E.C. Mr. O. T. Thomas, County Architect, County Offices, Haverfordwest:—

Weaver Bros., Swansea	£7,710
E. G. Thomas, St. Davids	5,868
D. Davies & Sons, Cardiff	4,841
E. E. Evans, St. Davids	4,220
James John, Haverfordwest	3,805
†John Morgan, Bridge Yard, Commercial-street, Neath	3,584

Southampton.—Demolition in connection with Bargate improvement scheme, for the C.B. Borough Engineer, 33-35, French-street:—

*Hudsons, Ltd., 666, Commercial-road, London, E.14 ..... £110

Southend-on-Sea.—Arcade of high-class shops adjoining High-street:—

*J. Sumner & Co. (Contractors), Ltd., 157, Shaftesbury-avenue, Thorpe Bay.

Southport.—Office and house and stores at Formby, for the Southport and District Water Board. Mr. C. Burton, Ede, engineer, 14, Portland-street:—

*J. Ward & Sons, Formby.

Stockport.—17 houses on the Didsbury-road site, for the T.C.:—

‡T. Davies & Son £5,823 6

Stockport.—Female casual wards at the Shaw Heath Institution, for the T.C. Messrs. Peter Peirce & Son, architects, 30, St. Petersgate:—

*Briggs & Co., Stockport £950

Swadlincote.—Twenty-four houses on the Main-street housing site, Newhall, including construction of carriageway and footpaths in connection therewith, for the U.D.C. Mr. Geo. A. Taylor, Housing Architect:—

Houses—	
*Harris Bros., Derby	£6,984 0 0
Road—	
*Harris Bros., Derby	659 11 11

Tayport.—Houses in Cupar-road, for the Corporation. Mr. V. Webster, Burgh Architect:—

Excavation, brick and mason—	
*R. Durie, Cupar-road, Tayport	£3,077
Slater—	
*W. Curry, Cement Worker, Kirkcaldy	787
Painting—	
*H. A. Bowman, Decorative Works, Anstruther	280
Joinery, carpentry and ironmongery—	
*G. Graham, 1, Elisabeth-street, Tayport	2,866
Plumber—	
*Walter Hughes, Cowgate, Tayport ...	1,141
Plaster—	
*D. T. Smith, Waggon-road, Leven ...	774
Window fittings—	
*The Crittall Manufacturing Co., Ltd., Royal Exchange-place, Glasgow	333

Wallasey.—Extensions to Victoria Central Hospital and Wallasey Dispensary, Liscard-road. Messrs. Rees & Holt, FF.R.I.B.A., architects, 64, Rodney-street, Liverpool:—

*Jones & Hough, Heswall.
(Estimated cost, £3,000.)

Wallsend.—120 houses on the land between the Stephenson Memorial schools and the Bewicke Council schools, Howdon, for the Corporation:—

*Ball & Thomas £30,162 0 2

Whitsoraigs.—Residence and offices near Craignethan-road:—

*Cowieson, Ltd., Charles-street, St. Rollox, Glasgow.

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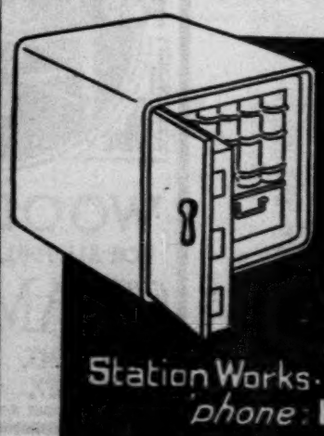

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